

# TC-WR701ES/WR735S

## SERVICE MANUAL

*US Model*

TC-WR701ES

*Canadian Model*

*AEP Model*

*Australian Model*

TC-WR735S



This photo is TC-WR701ES.

Model Name Using Similar Mechanism	TC-WR690/WR790	
Tape Transport Mechanism Type	DECK A	TCM-190RB11C
	DECK B	TCM-190RB11C

### SPECIFICATIONS

Recording system 4-track 2-channel stereo  
Fast winding time Approx. 90 sec. (with Sony C-60 cassette)  
Bias AC bias  
Signal-to-noise ratio (at peak level and weighted)

Cassette (Dolby NR off)	Type IV	Type II	Type I
	58 dB	57 dB	55 dB

S/N ratio improvement (approximate values)  
with Dolby B NR on: 5 dB at 1 kHz; 10 dB at 5 kHz  
with Dolby C NR on: 15 dB at 500 Hz; 20 dB at 1 kHz  
with Dolby S NR on: 10 dB at 100 Hz; 24 dB at 1 kHz

Harmonic distortion 0.4% (with Type I, 160 nWb/m, 315 Hz, 3rd H.D.)  
1.8% (with Type IV, 250 nWb/m, 315 Hz, 3rd H.D.)

Frequency response (Dolby NR off)

Type IV cassette	30 - 19,000 Hz ( $\pm 3$ dB, IEC) 30 - 13,000 Hz ( $\pm 3$ dB (-4 dB) recording)
Type II cassette	30 - 18,000 Hz ( $\pm 3$ dB, IEC)
Type I cassette	30 - 16,000 Hz ( $\pm 3$ dB, IEC)

Type IV : Sony METAL-S  
Type II : Sony UX-S  
Type I : Sony HF-S

Wow and flutter  $\pm 0.13\%$  W.Peak (IEC)  
0.07% W.RMS (NAB)  
 $\pm 0.18\%$  W.Peak (DIN)

Inputs

Line inputs (phono jacks)	Sensitivity	0.16 V
	Input impedance	47 k ohms

Outputs

Line outputs (phono jacks)	Rated output level	0.5 V at a load impedance of 47 k ohms
	Load impedance	Over 10 k ohms
Headphones (stereo phone jack)	Output level	1 mW at a load impedance of 32 ohms

### General

Power requirements 120 V AC, 60 Hz (US, Canadian model)  
220—230 V AC, 50/60 Hz (AEP, German model)  
240 V AC, 50/60 Hz (Australian model)  
Power consumption 33 W  
Dimensions Approx. 430×135×295 mm (w/h/d)  
(17×5<sup>3</sup>/<sub>8</sub>×11<sup>5</sup>/<sub>8</sub> inches) including projecting parts and controls  
Mass Approx. 4.8 kg (10 lbs 10 oz)

### Supplied accessories

Audio connecting cords (2)

Design and specifications are subject to change without notice.

STEREO CASSETTE DECK  
**SONY**®



## Features

### For higher quality recording/playback

- The **Dolby HX PRO\*** system which improves the linearity of the tape's high-range response during recording.
- **B, C and S type Dolby NR\*** systems which reduce tape noise.
- **Automatic calibration on each deck** which ensures optimum recording conditions to bring out the best in every tape.

### For your convenience

- **Automatic tape type detection** during playback and recording.
- The **Multi-AMS and Memory Play functions** which provide easy access to a desired selection.
- A **relay function** for long recording and playback.
- **Auto play function** which automatically starts playback after tape rewinding to start.
- **Synchronized dubbing** at normal or high speed.
- **Simultaneous Recording function** for the simultaneous recording of the same source to cassettes in both decks.

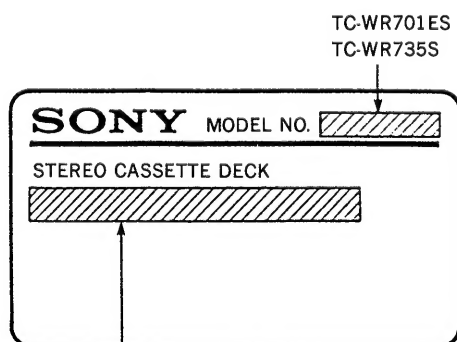
### For easier operation

- **Twin easy-to-read linear counters** which show the elapsed recording or playing time on each deck.
- An **optional remote commander** which allows the remote control of various operations.

\* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

"DOLBY", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

### MODEL IDENTIFICATION (Specification Label)



US, Canadian model: AC 120V 60Hz 33W  
 AEP, German model: AC 220—230V~50/60Hz 33W  
 Australian model : AC 240V~50/60Hz

## SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

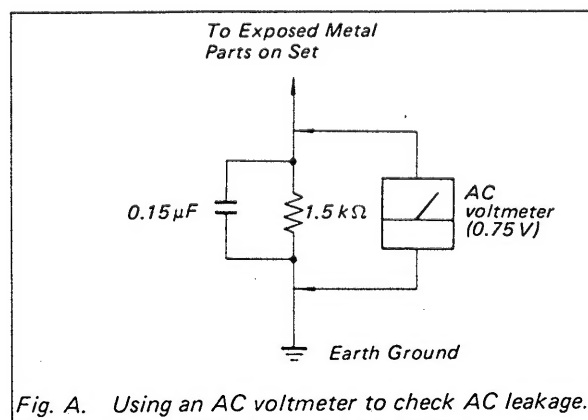




Fig. A. Using an AC voltmeter to check AC leakage.


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### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

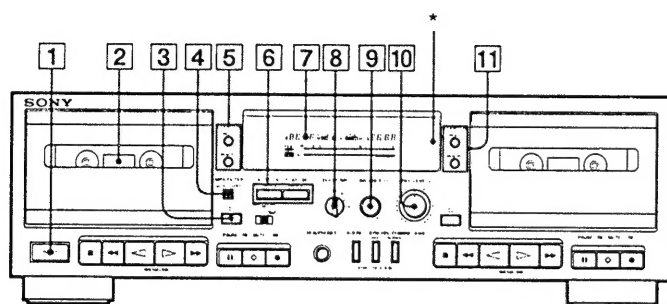
## SECTION 1 GENERAL

This section is extracted from instruction manual.

### Identifying the Parts

#### Front Panel



For details, refer to the page number(s) indicated in parentheses.

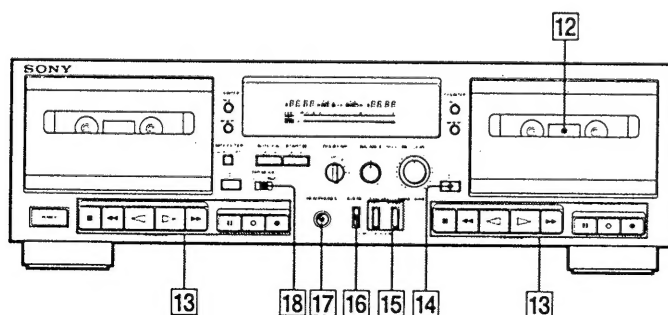


- 1 POWER switch
- 2 Deck A
- 3 ▲ (eject) button (deck A)
- 4 MPX (multiplex) FILTER ON/OFF switch (36)
- 5 COUNTER buttons (deck A) (30)  
RESET button  
MEMORY button
- 6 AUTO CAL (calibration) buttons (DECK A, DECK B) (48,50)
- 7 Display panel
- 8 DOLBY NR (Dolby noise reduction) switch (18,22,32,42,44)
- 9 BALANCE control (32)
- 10 REC (recording) LEVEL control (32,36)
- 11 COUNTER buttons (deck B) (30)  
RESET button  
MEMORY button

#### \* Remote control sensor

You can remotely control this cassette deck with:

- A remote commander that came with a Sony amplifier or receiver if it has the  mark and cassette deck control capability.
- Any optional Sony remote commander with the  mark and cassette deck control capability.



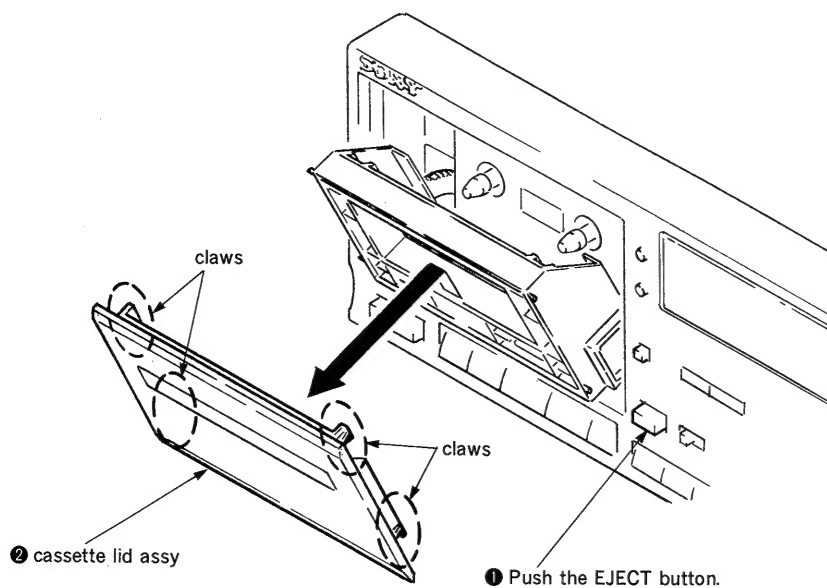
- 12 Deck B
- 13 Tape operation buttons  
■ (stop) button  
◀◀ (leftward fast winding) (Multi-AMS\*\*) button  
◀ (reverse play) button  
▶ (forward play) button  
▶▶ (rightward fast winding) (Multi-AMS\*\*) button  
|| PAUSE button.  
○ REC MUTE (record muting) button (46)  
● REC (recording) button
- 14 ▲ (eject) button (deck B)
- 15 SYNCHRO DUBBING buttons (52)  
HIGH speed button  
NORMAL speed button
- 16 A+B REC (simultaneous recording) button (42)
- 17 HEADPHONES jack (stereo phone jack)
- 18 DIR (direction) MODE switch (18,22,32,42,44,52)

\*\* AMS is an abbreviation for Automatic Music Sensor.

## SECTION 2 DISASSEMBLY

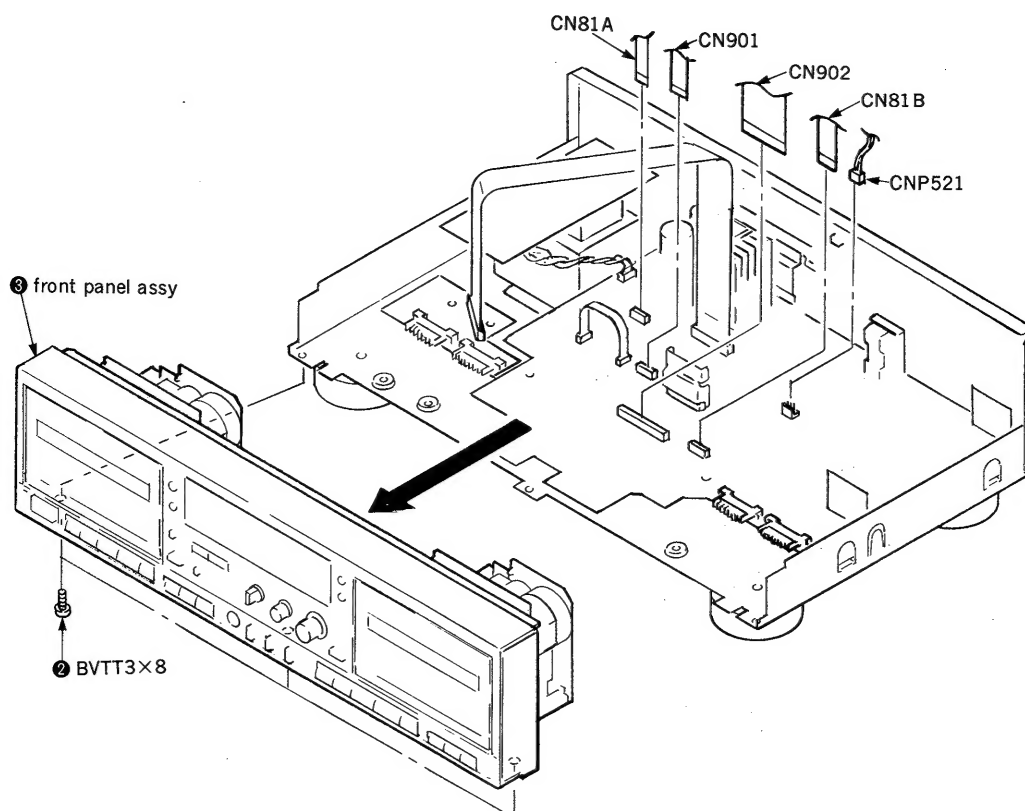
**Note :** Follow the disassembly procedure in the numerical order given.

### 2-1. CASSETTE LID ASSY

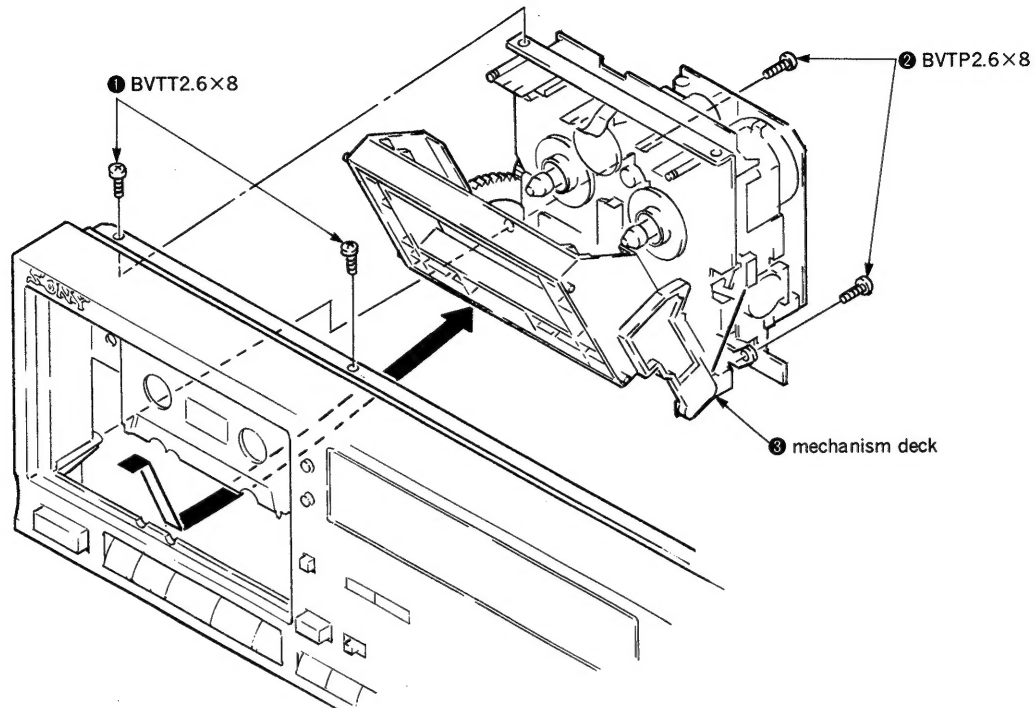


### 2-2. FRONT PANEL ASSY

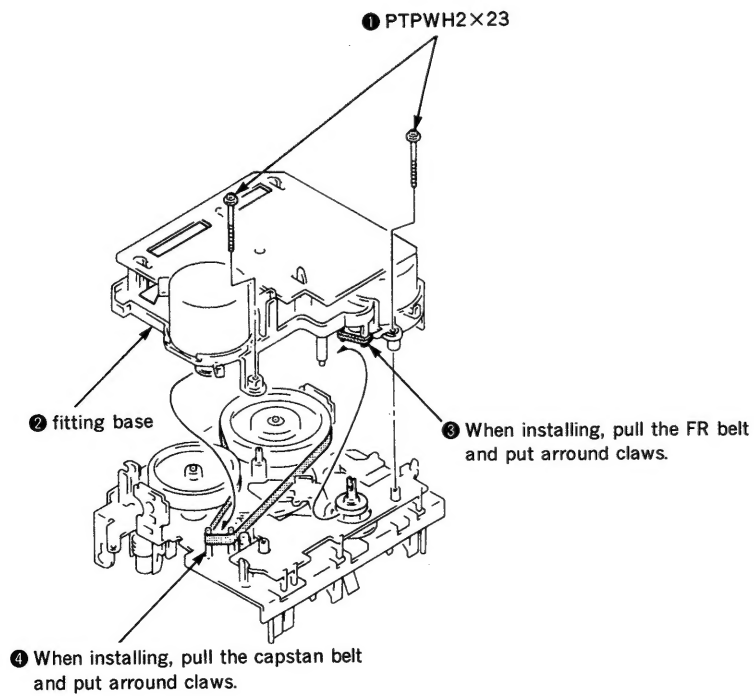
① Remove the connectors.



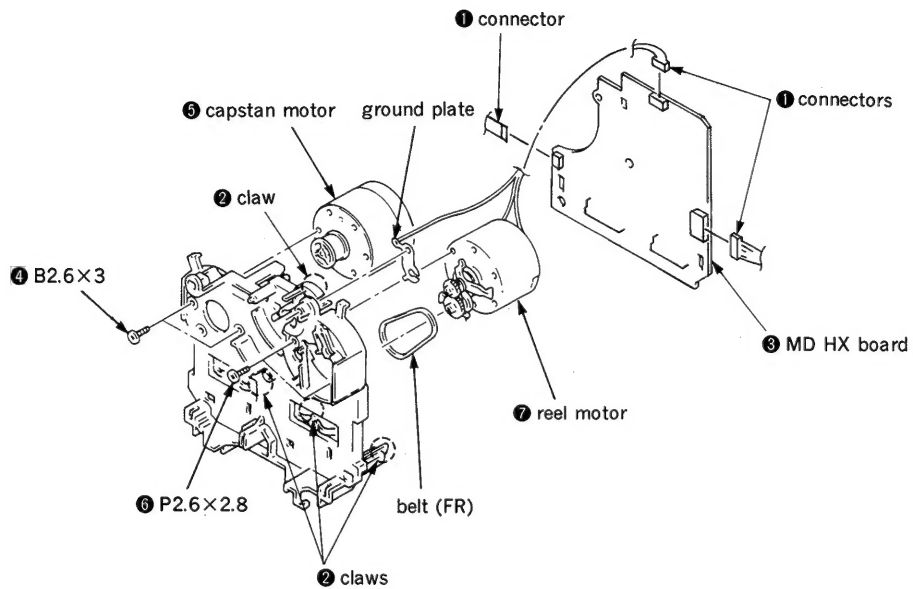
## 2-3. MECHANISM DECK



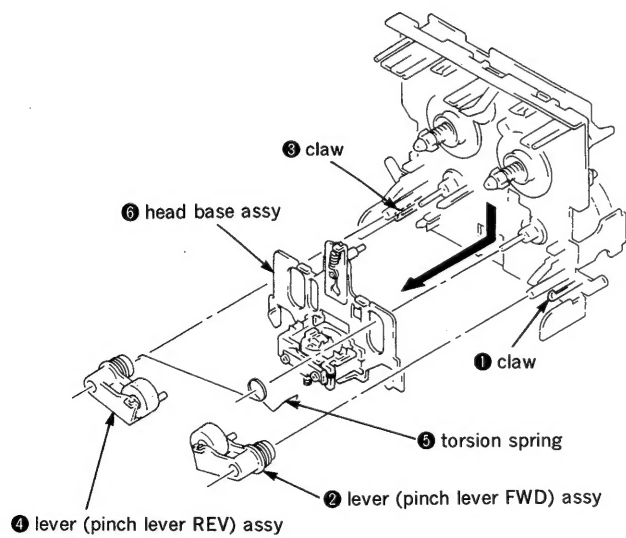
## 2-4. CAPSTAN MOTOR, REEL MOTOR (1)



## 2-5. CAPSTAN MOTOR, REEL MOTOR (2)



## 2-6. HEAD, PINCH ROLLER



## SECTION 3 MECHANICAL ADJUSTMENTS

### PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab :  
     record/playback/erase head   pinch roller  
     rubber belts                    idlers  
     capstan
2. Demagnetize the record/playback head with a head demagnetizer.  
 (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

### Torque Measurement

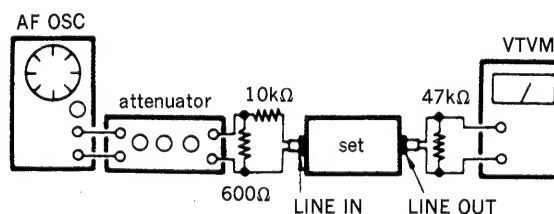
Torque	Torque meter	Meter reading
Forward	CQ-102C	30 to 65g·cm (0.42 to 0.90 oz·inch)
Forward back tension	CQ-102C	1 to 6g·cm (0.014 to 0.08 oz·inch)
Reverse	CQ-102RC	30 to 65g·cm (0.42 to 0.90 oz·inch)
Reverse back tension	CQ-102RC	1 to 6g·cm (0.014 to 0.08 oz·inch)
Forward, Reverse	CQ-201B	70 to 120g·cm (0.98 to 1.67 oz·inch)

## SECTION 4 ELECTRICAL ADJUSTMENTS

### PRECAUTION

1. The adjustment should be performed in the publication.  
 (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
  - Switch position  
     DOLBY NR switch : OFF  
     DIR MODE switch :  $\rightleftharpoons$
  - Standard record position  
     Deliver the standard input signal level to input jack and set the REC LEVEL control to obtain the standard output signal level as follows.

—Record Mode—



### Standard Input Level

Input terminal	LINE IN
source impedance	10kΩ
input signal level	0.25V (−10dB)

### Standard Output Level

Output terminal	LINE OUT
load impedance	47kΩ
output signal level	0.44V (−5dB)

### Test Tape

Tape	Contents	Use
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment



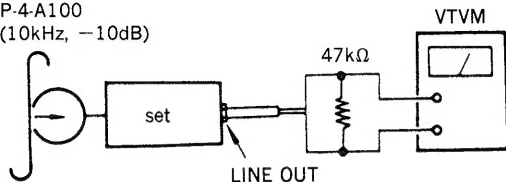
## Record/Playback Head Azimuth Adjustment

**DECK A** **DECK B**

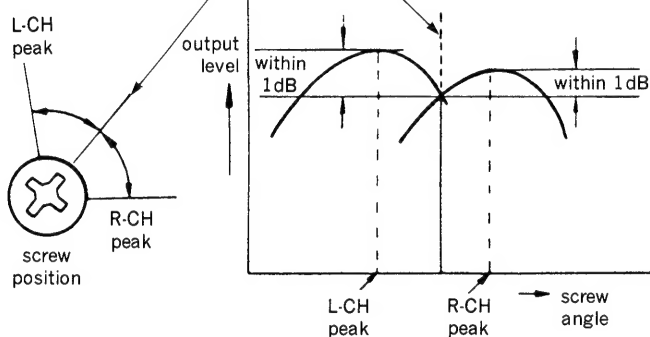
### Procedure :

1. Reverse Playback Mode

test tape  
P-4-A100  
(10kHz, -10dB)

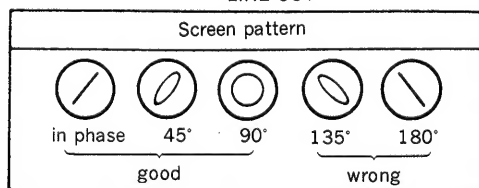
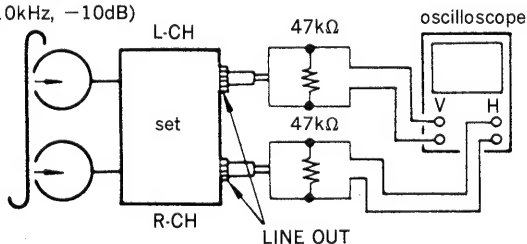


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



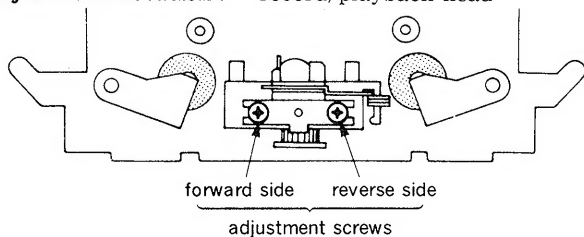
3. Playback Mode

test tape  
P-4-A100  
(10kHz, -10dB)



4. Change the forward playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screws with suitable locking compound.

**Adjustment Location :** —record/playback head—



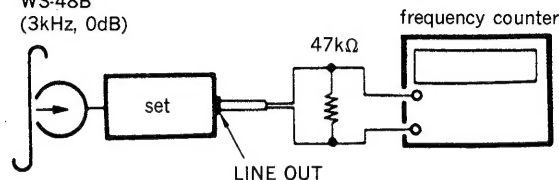
## Tape Speed Adjustment **DECK A** **DECK B**

Perform high speed adjustment before normal speed adjustment.

### Procedure :

—Forward Playback Mode—

test tape  
WS-48B  
(3kHz, 0dB)



(high speed adjustment)

1. Short the connector TP1 (pins ① and ②). (test mode)
2. Keep on pressing the SYNCHRO DUBBING HIGH switch.
3. Adjust each RV72 so that the frequency counter reading becomes within adjustment limits of  $6,000 \pm 20\text{Hz}$  on both of deck A and deck B.
4. Change the reverse playback mode and repeat the steps 2 and 3.

(normal speed adjustment)

5. After adjustment, open the connector TP1.
6. Keep on pressing the SYNCHRO DUBBING NORM switch.
7. Adjust each RV71 so that the frequency counter reading becomes within adjustment limits of  $3,000 \pm 10\text{Hz}$  on both of deck A and deck B.
8. Change the reverse playback mode and repeat the steps 6 and 7.

Frequency difference between the beginning and the end of the tape should be within 3%.

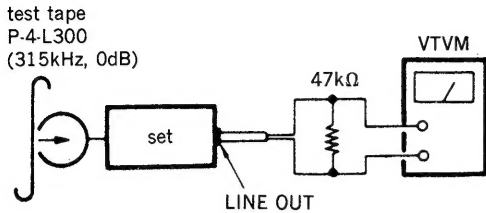
Frequency difference between deck A and deck B the beginning of the tape should be within 1.5%.

**Adjustment Location :** MD HX board

## Playback Level Adjustment DECK A DECK B

### Procedure :

—Forward Playback Mode—



Adjust each RV11 (L-CH) and RV21 (R-CH) so that the VTVM reading becomes within adjustment limits below on both of deck A and deck B.

### Adjustment Limits :

LINE OUT level :  $-7.7 \pm 0.5\text{dB}$  (0.301 to 0.338V)

Level difference between channels : within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

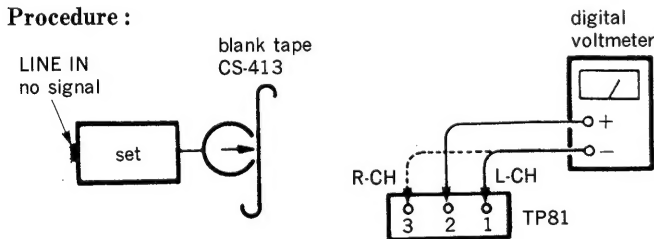
**Adjustment Location :** MD HX board

## Bias Consumption Current Adjustment

### DECK A DECK B

This adjustment should be performed when replacing the head assy or the bias oscillating transformer (T81, T91).

### Procedure :



1. Connect the digital voltmeter to test point TP81.
2. Set RV81 (L-CH) and RV91 (R-CH) to mechanical center.
3. Set to forward record mode.
4. Adjust T81 (L-CH) and T91 (R-CH) so that the digital voltmeter reading becomes minimum.

**Adjustment Location :** MD HX board

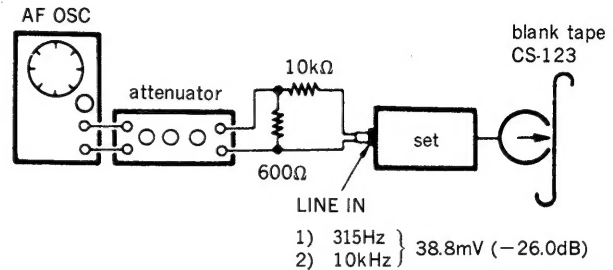
## Record Bias Adjustment DECK A DECK B

### Setting :

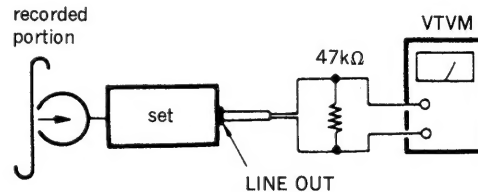
REC LEVEL control : standard record position (Refer to page 8.)

### Procedure :

1. Record Mode



2. Playback Mode



3. Playback the signal recorded in step 1, and confirm that the 10kHz playback output level is VTVM reading becomes within adjustment limits below relative to the 315Hz output.
4. If the adjustment limits are not satisfied, adjust each RV81 (L-CH) and RV91 (R-CH) so that the VTVM reading becomes within adjustment limits below.

### Adjustment Limits :

10kHz playback output

relative to the 315Hz output :  $0 \pm 0.5\text{dB}$

(0.732 to 0.821V)

**Adjustment Location :** MD HX board

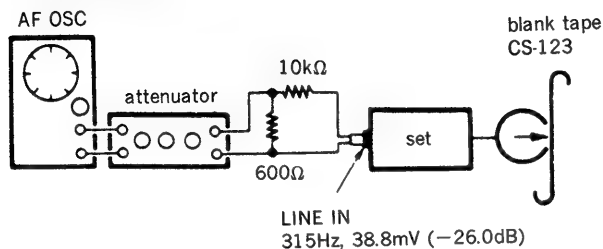
## Record Level Adjustment **DECK A** **DECK B**

### Setting :

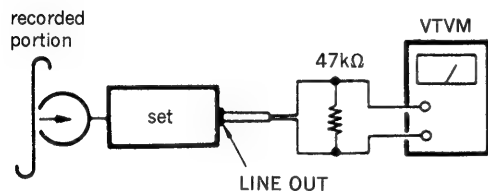
REC LEVEL control : standard record position (Refer to page 8.)

### Procedure :

1. Record Mode



2. Playback Mode



(Deck A)

3. Playback the signal recorded in step 1, and confirm that the playback output level is VTVM reading becomes within adjustment limits below.
4. If the adjustment limits are not satisfied, adjust each RV181 (L-CH) and RV281 (R-CH) so that the VTVM reading becomes within adjustment limits below.

(Deck B)

5. Similarly, playback the signal recorded in step 1, and confirm that the playback output level is VTVM reading becomes within adjustment limits below.
6. If the adjustment limits are not satisfied, adjust each RV171 (L-CH) and RV271 (R-CH) so that the VTVM reading becomes within adjustment limits below.

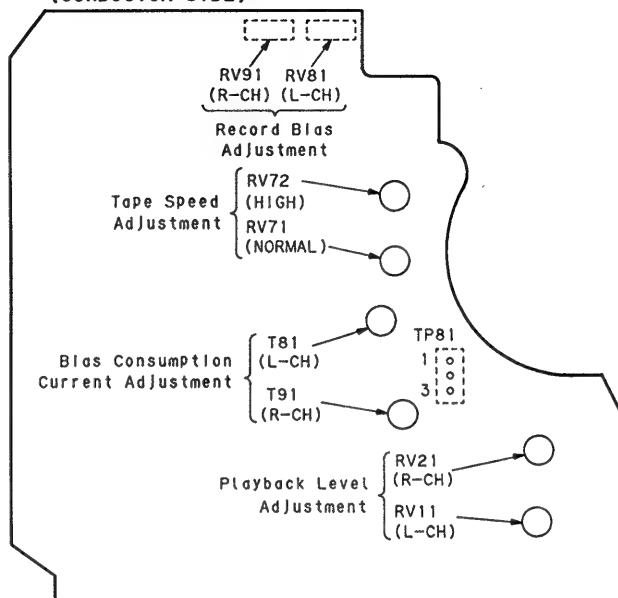
### Adjustment Limits :

315Hz playback output level :  $-26.0 \pm 0.5\text{dB}$  (36.7 to 41.1mV)

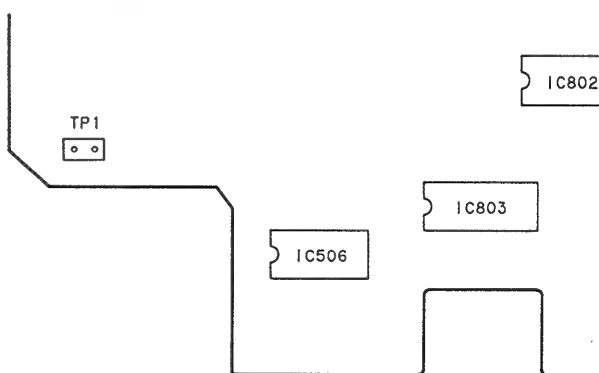
Adjustment Location : main board

### Adjustment Location :

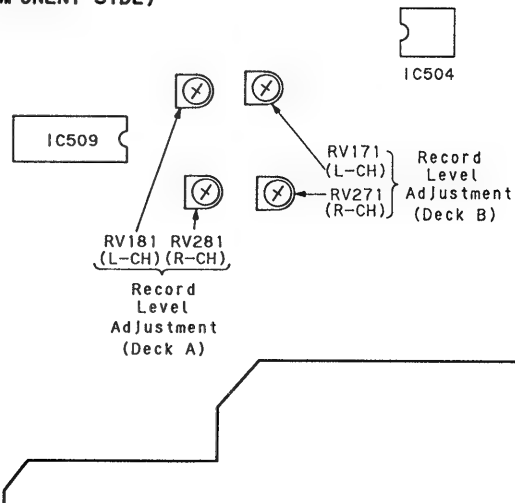
#### 【MD HX BOARD】 (CONDUCTOR SIDE)



#### 【 MAIN BOARD 】 (COMPONENT SIDE)

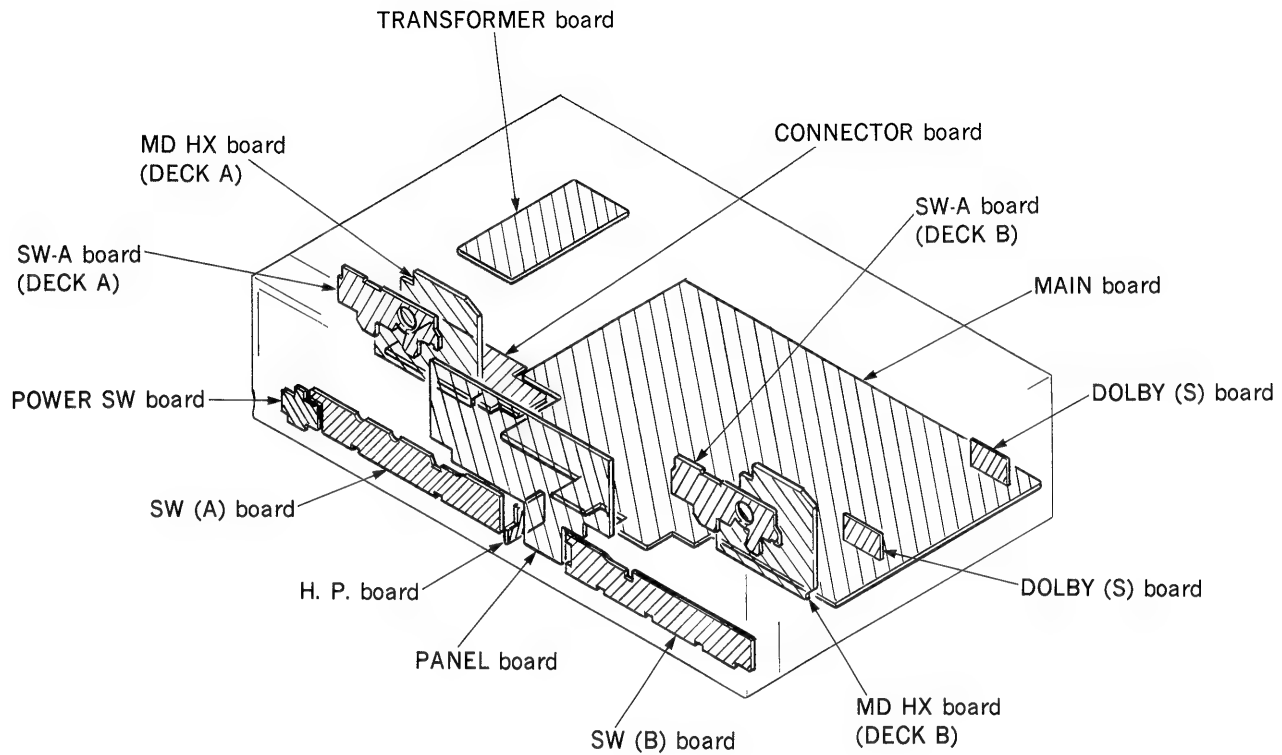


#### 【 MAIN BOARD 】 (COMPONENT SIDE)



## SECTION 5 DIAGRAMS

### 5-1. CIRCUIT BOARDS LOCATION





MECHANISM DECK BLOCK (A)

[MD HX BOARD]

HPRE 101 RECORD/PLAYBACK/ERASE HEAD

M2 REEL MOTOR

M1 CAPSTAN MOTOR

587 DIRECTION

[SW-A BOARD]

S83 METAL DET

S86 HALF DET

S82 TOP DET

S85 ERASE PROOF (SIDE B)

R82 S S R83

R84 S S R85

R86 S S R87

R88 S S R89

R90 S S R91

R92 S S R93

R94 S S R95

R96 S S R97

R98 S S R99

R100 S S R101

R102 S S R103

R104 S S R105

R106 S S R107

R108 S S R109

R110 S S R111

R112 S S R113

R114 S S R115

R116 S S R117

R118 S S R119

R120 S S R121

R122 S S R123

R124 S S R125

R126 S S R127

R128 S S R129

R130 S S R131

R132 S S R133

R134 S S R135

R136 S S R137

R138 S S R139

R140 S S R141

R142 S S R143

R144 S S R145

R146 S S R147

R148 S S R149

R150 S S R151

R152 S S R153

R154 S S R155

R156 S S R157

R158 S S R159

R160 S S R161

R162 S S R163

R164 S S R165

R166 S S R167

R168 S S R169

R170 S S R171

R172 S S R173

R174 S S R175

R176 S S R177

R178 S S R179

R180 S S R181

R182 S S R183

R184 S S R185

R186 S S R187

R188 S S R189

R190 S S R191

R192 S S R193

R194 S S R195

R196 S S R197

R198 S S R199

R200 S S R201

R202 S S R203

R204 S S R205

R206 S S R207

R208 S S R209

R210 S S R211

R212 S S R213

R214 S S R215

R216 S S R217

R218 S S R219

R220 S S R221

R222 S S R223

R224 S S R225

R226 S S R227

R228 S S R229

R230 S S R231

R232 S S R233

R234 S S R235

R236 S S R237

R238 S S R239

R240 S S R241

R242 S S R243

R244 S S R245

R246 S S R247

R248 S S R249

R250 S S R251

R252 S S R253

R254 S S R255

R256 S S R257

R258 S S R259

R260 S S R261

R262 S S R263

R264 S S R265

R266 S S R267

R268 S S R269

R270 S S R271

R272 S S R273

R274 S S R275

R276 S S R277

R278 S S R279

R280 S S R281

R282 S S R283

R284 S S R285

R286 S S R287

R288 S S R289

R290 S S R291

R292 S S R293

R294 S S R295

R296 S S R297

R298 S S R299

R300 S S R301

R302 S S R303

R304 S S R305

R306 S S R307

R308 S S R309

R310 S S R311

R312 S S R313

R314 S S R315

R316 S S R317

R318 S S R319

R320 S S R321

R322 S S R323

R324 S S R325

R326 S S R327

R328 S S R329

R330 S S R331

R332 S S R333

R334 S S R335

R336 S S R337

R338 S S R339

R340 S S R341

R342 S S R343

R344 S S R345

R346 S S R347

R348 S S R349

R350 S S R351

R352 S S R353

R354 S S R355

R356 S S R357

R358 S S R359

R360 S S R361

R362 S S R363

R364 S S R365

R366 S S R367

R368 S S R369

R370 S S R371

R372 S S R373

R374 S S R375

R376 S S R377

R378 S S R379

R380 S S R381

R382 S S R383

R384 S S R385

R386 S S R387

R388 S S R389

R390 S S R391

R392 S S R393

R394 S S R395

R396 S S R397

R398 S S R399

R400 S S R401

R402 S S R403

R404 S S R405

R406 S S R407

R408 S S R409

R410 S S R411

R412 S S R413

R414 S S R415

R416 S S R417

R418 S S R419

R420 S S R421

R422 S S R423

R424 S S R425

R426 S S R427

R428 S S R429

R430 S S R431

R432 S S R433

R434 S S R435

R436 S S R437

R438 S S R439

R440 S S R441

R442 S S R443

R444 S S R445

R446 S S R447

R448 S S R449

R450 S S R451

R452 S S R453

R454 S S R455

R456 S S R457

R458 S S R459

R460 S S R461

R462 S S R463

R464 S S R465

R466 S S R467

R468 S S R469

R470 S S R471

R472 S S R473

R474 S S R475

R476 S S R477

R478 S S R479

R480 S S R481

R482 S S R483

R484 S S R485

R486 S S R487

R488 S S R489

R490 S S R491

R492 S S R493

R494 S S R495

R496 S S R497

R498 S S R499

R500 S S R501

R502 S S R503

R504 S S R505

R506 S S R507

R508 S S R509

R510 S S R511

R512 S S R513

R514 S S R515

R516 S S R517

R518 S S R519

R520 S S R521

R522 S S R523

R524 S S R525

R526 S S R527

R528 S S R529

R530 S S R531

R532 S S R533

R534 S S R535

R536 S S R537

R538 S S R539

R540 S S R541

R542 S S R543

R544 S S R545

R546 S S R547

R548 S S R549

R550 S S R551

R552 S S R553

R554 S S R555

R556 S S R557

R558 S S R559

R560 S S R561

R562 S S R563

R564 S S R565

R566 S S R567

R568 S S R569

R570 S S R571

R572 S S R573

R574 S S R575

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R580 S S R581

R582 S S R583

R584 S S R585

R586 S S R587

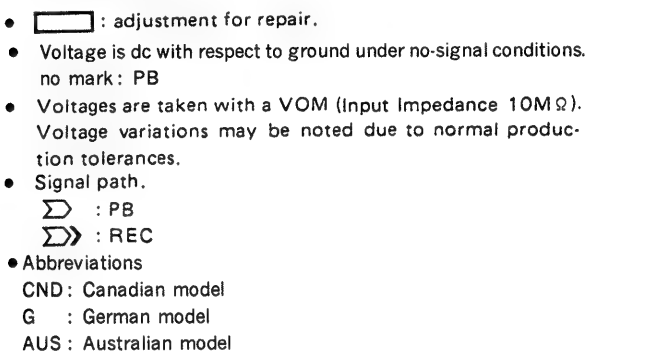
R588 S S R589

R590 S S R591

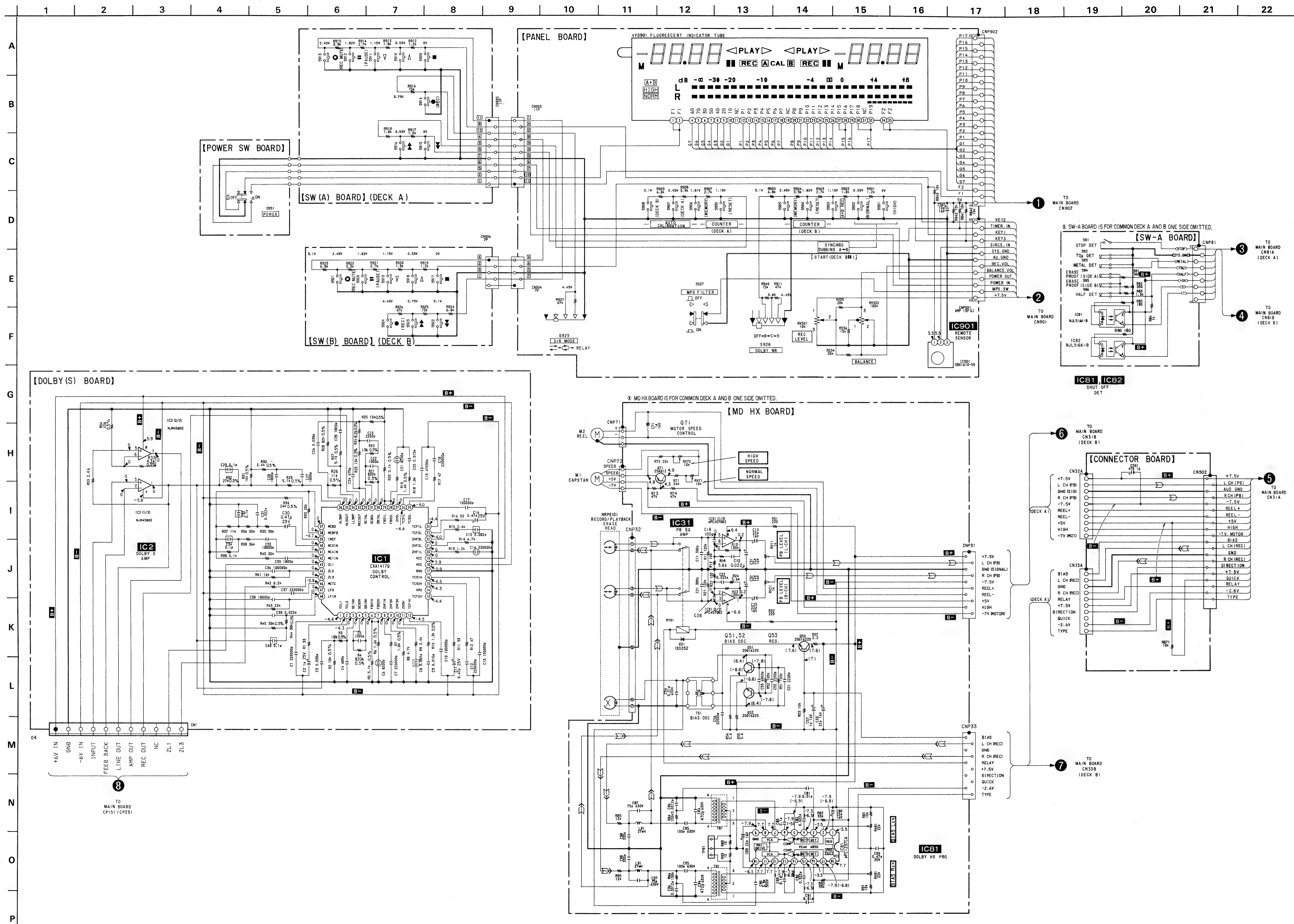
R592 S S R593




R594 S S R595





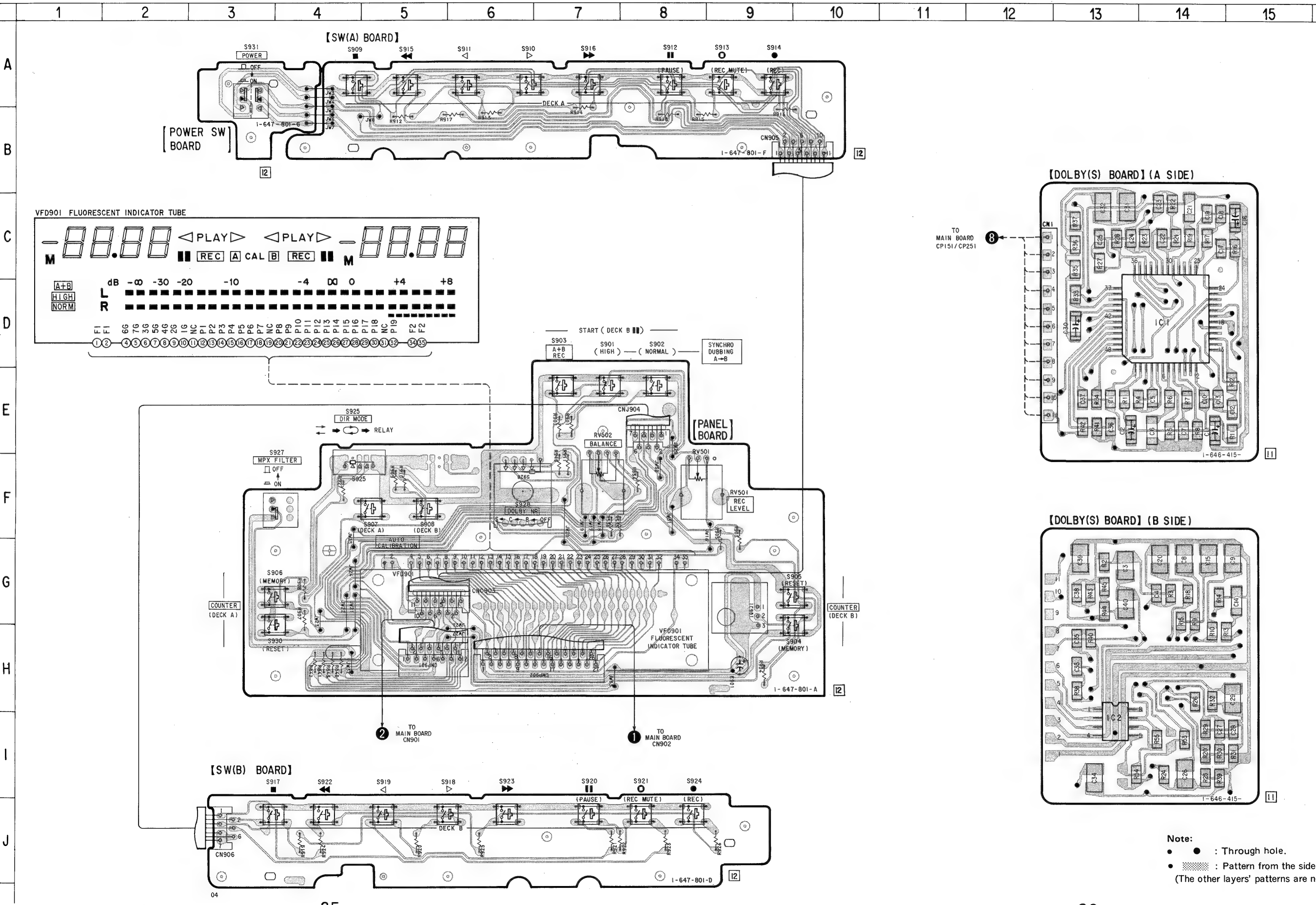
**5-4. SCHEMATIC DIAGRAM —PANEL SECTION—** • Refer to Page 28 for IC Block Diagrams.



- **Note:**
  - All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$ : 50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $1/2$  W or less unless otherwise specified.
  - % : indicates tolerance.
  -  : adjustment for repair.
  - Voltage is dc with respect to ground under no-signal conditions
  - no mark: PB  
( ) : REC
  - Voltages are taken with a VOM (Input Impedance  $10\text{M}\Omega$ ).
  - Voltage variations may be noted due to normal production tolerances.
- Signal path.
  -  : PB
  -  : REC



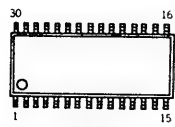
5-5. PRINTED WIRING BOARDS —PANEL SECTION—





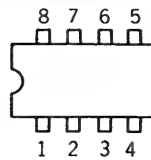
# 5-6. SEMICONDUCTOR LEAD LAYOUTS

CXA1332M



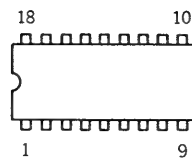
TOP VIEW

M5218AP



(Top view)

$\mu$ PC1297CA

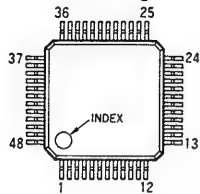


(Top view)

2SB1116A-L  
2SD1387-3

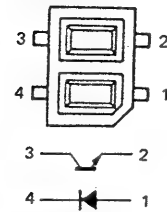


CXA1417Q  
CXA1599Q

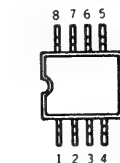


(TOP VIEW)

NJL5165K-B (H1)

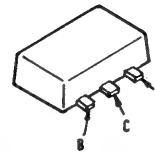


$\mu$ PC4570G2

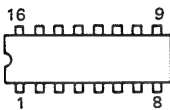


(TOP VIEW)

2SD1622-S

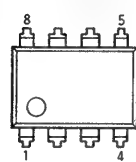


CXA1578P  
HD14053BFP  
MC14052BCP  
M5283P  
UP14053BC



(TOP VIEW)

NJM4580E-D  
 $\mu$ PC4558C

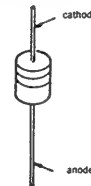


(TOP VIEW)

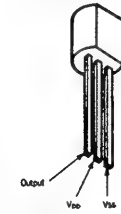
DTA114ES  
DTA144ES  
DTC114ES  
DTC143TS  
2SA1317-STU  
2SC2603-EF  
2SD2144S-UVW



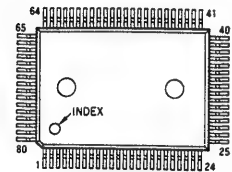
HZS6A1L  
HZS9A2L  
UZL-7H1  
UZL-7L2



PST600E-T

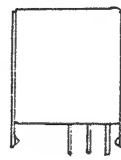


CXP82316-019Q

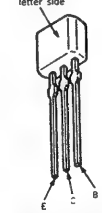


(TOP VIEW)

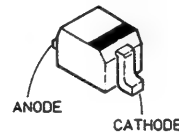
SBX1610-59



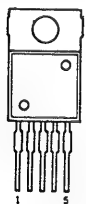
DTC144ES



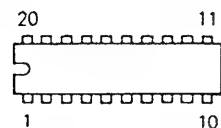
MA110



MC14052BF

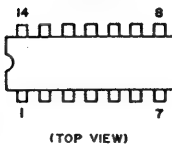


M50255P



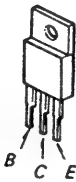
(Top view)

SN74HC04N

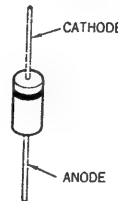


(TOP VIEW)

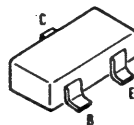
2SB1094-LK  
2SD1406-YGR



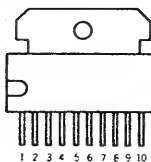
1N4148M  
10E2N



2SA1162-G  
2SA1235-F



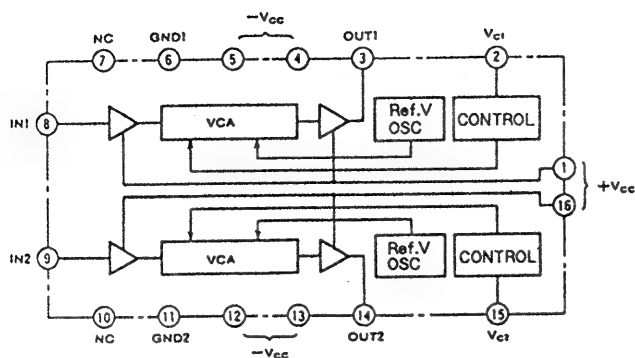
TA7272P



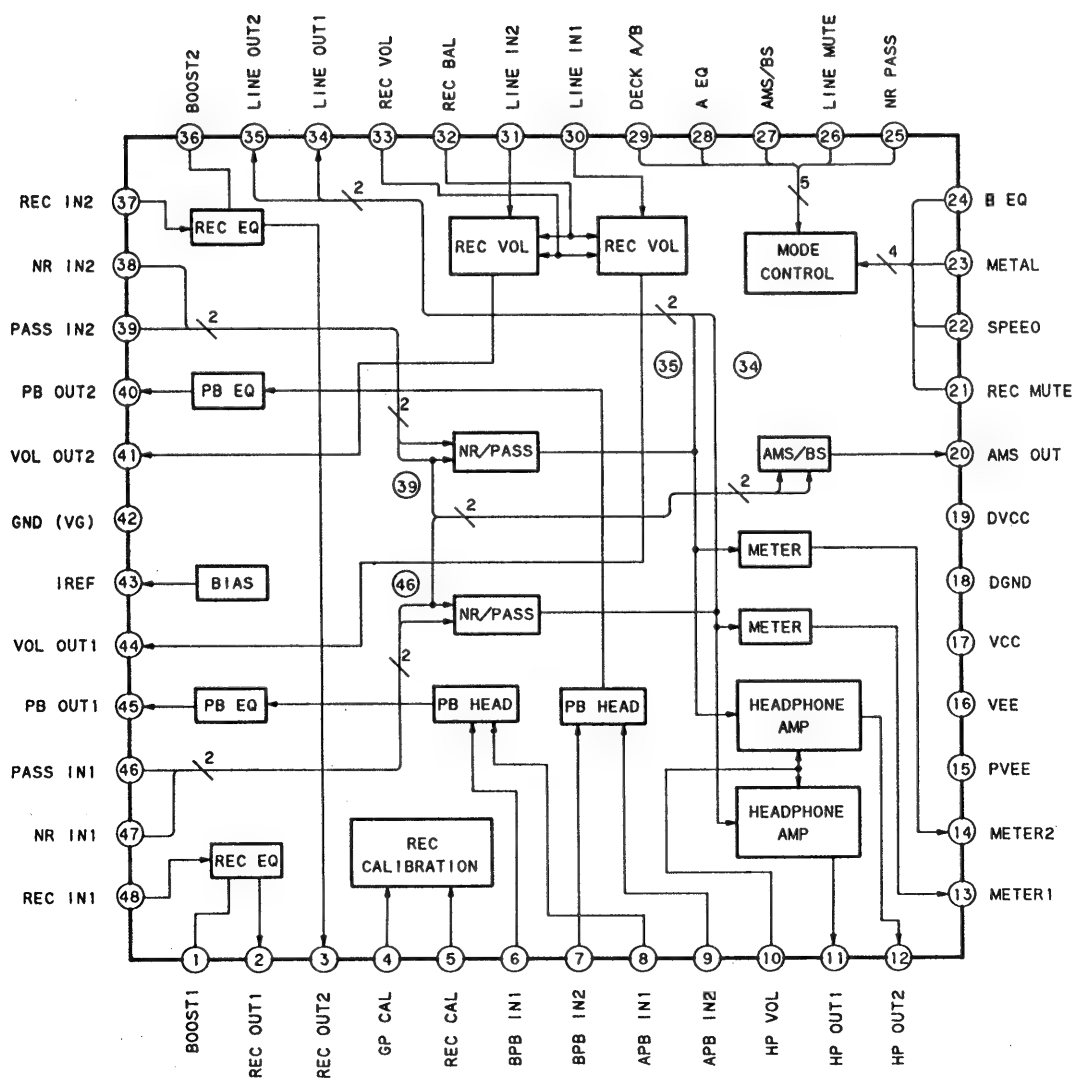
MARKING SIDE VIEW

• IC Block Diagrams

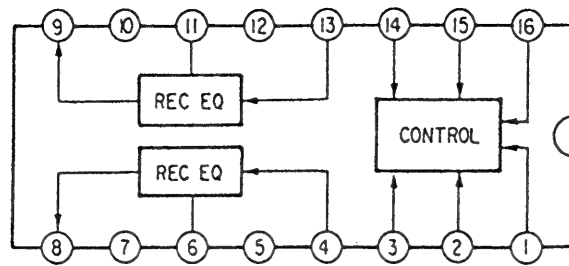
IC511 M5283P



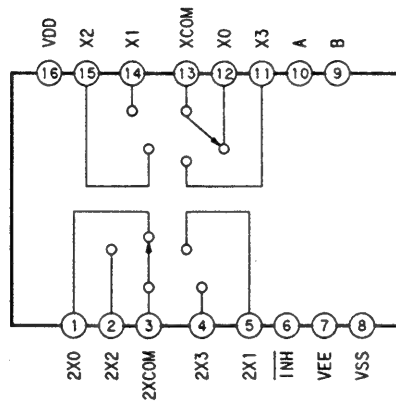
IC502 CXA1599Q



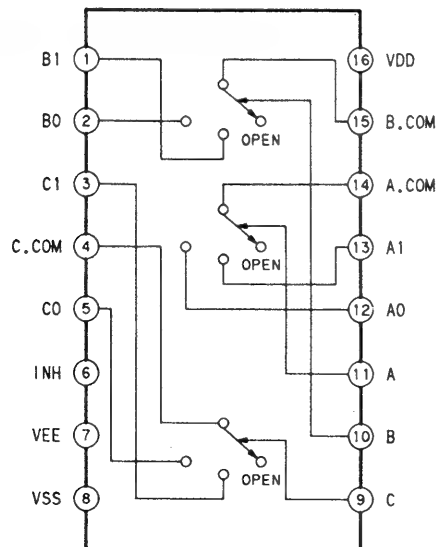
**IC509 CXA1578P**



**IC803, 805 MC14052BCP**



**IC151, 251, 507, 508 MC14053BCP**



## SECTION 6 EXPLODED VIEWS

### NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

### ● Abbreviations

G : German model  
AUS : Australian model

### 6-1. CABINET SECTION

▲ B : TRANSFORMER board (US, Canadian model)

▲ C : TRANSFORMER board (AEP, G, AUS model)

▲ E : CONNECTOR board

- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts

Example :

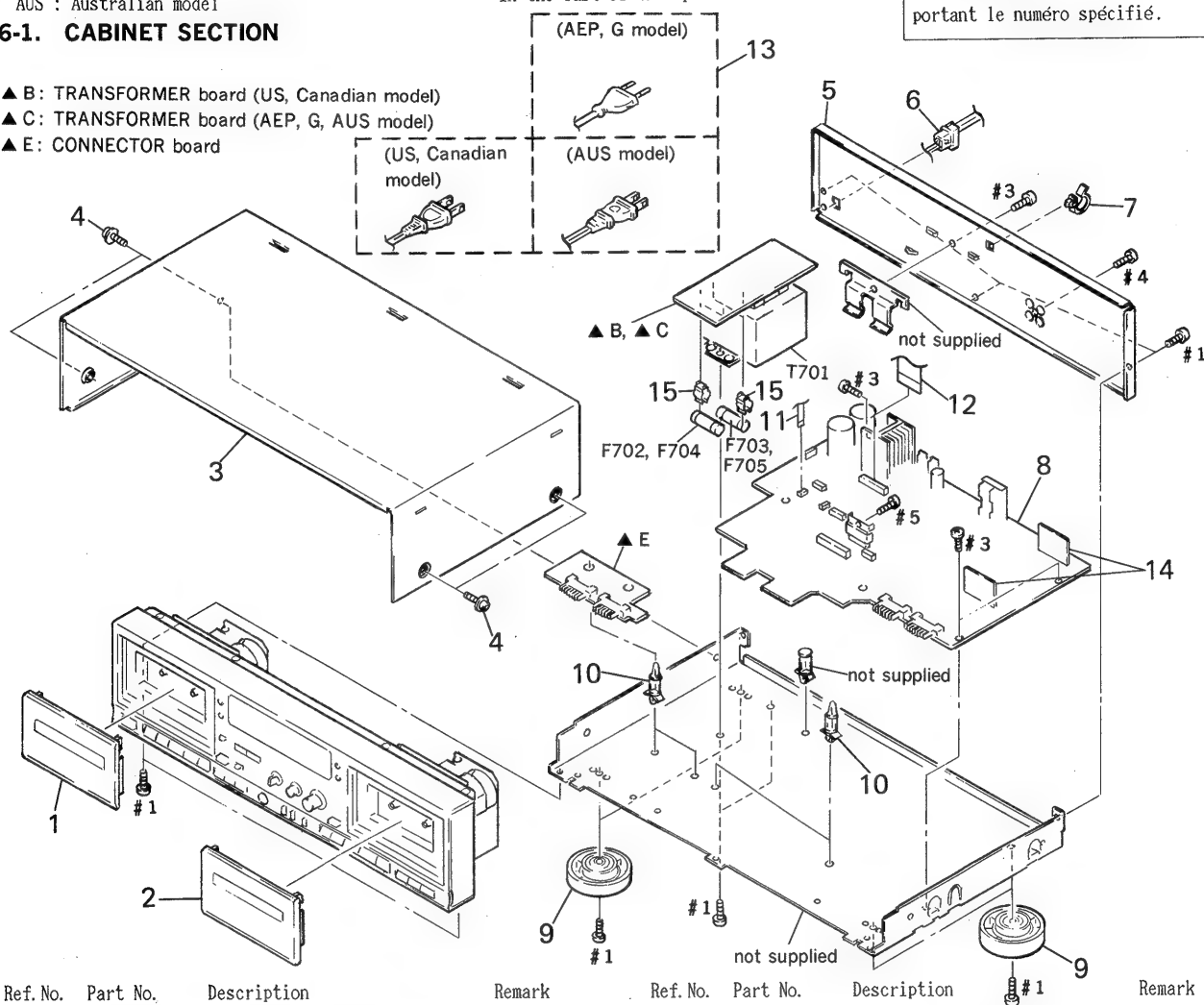
KNOB, BALANCE (WHITE)... (RED)

Parts Color Cabinet's Color

- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

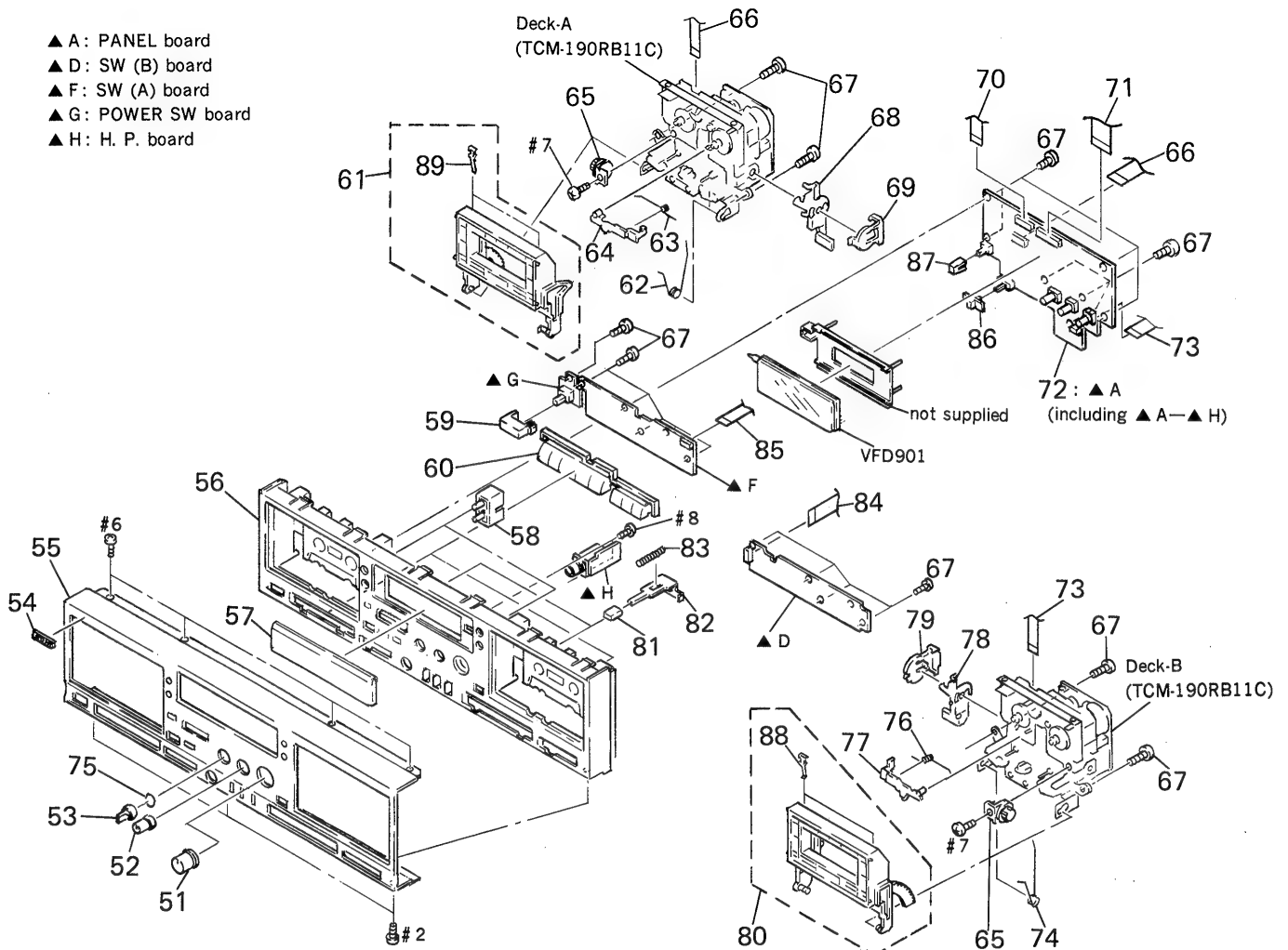


Ref. No.	Part No.	Description	Remark
1	X-3366-515-1	LID ASSY (A), CASSETTE (WR701ES)	
1	X-3366-517-1	LID ASSY (A), CASSETTE (WR735S)	
2	X-3366-516-1	LID ASSY (B), CASSETTE (WR701ES)	
2	X-3366-518-1	LID ASSY (B), CASSETTE (WR735S)	
* 3	4-929-294-42	CASE	
4	3-704-366-01	SCREW (CASE) (M3X8)	
* 5	3-387-824-01	PANEL, BACK (WR701ES)	
* 5	3-387-824-11	PANEL, BACK (WR735S:Canadian)	
* 5	3-387-824-21	PANEL, BACK (WR735S:AEP, G)	
* 5	3-387-824-31	PANEL, BACK (WR735S:AUS)	
* 6	3-703-244-00	BUSHING (2104), CORD (WR735S)	
* 6	3-703-571-11	BUSHING (S) (4516), CORD (WR701ES)	
* 7	4-949-235-01	HOOK (WR735S:Canadian, AEP, G, WR701ES)	
* 8	A-2007-028-A	MAIN BOARD, COMPLETE (WR735S:Canadian, WR701ES)	
* 8	A-2007-057-A	MAIN BOARD, COMPLETE (WR735S:AEP, G, AUS)	
9	4-943-148-32	FOOT (F58175SW) (WR735S:Canadian)	
9	4-943-148-42	FOOT (F58175SW) (WR735S:AEP, G, AUS, WR701ES)	

Ref. No.	Part No.	Description	Remark
* 10	3-346-265-11	HOLDER, PC BOARD	
11	1-575-730-11	WIRE, FLAT TYPE (5 CORE)	
12	1-590-217-11	WIRE, FLAT TYPE (20 CORE)	
$\Delta$ 13	1-558-945-21	CORD, POWER (POLAR SPT-1) (WR735S:Canadian, WR701ES)	
$\Delta$ 13	1-575-651-21	CORD, POWER (WR735S:AEP, G)	
$\Delta$ 13	1-696-845-11	CORD, POWER (WR735S:AUS)	
* 14	A-2006-954-A	DOLBY (S) BOARD, COMPLETE	
15	1-533-183-11	HOLDER, FUSE	
$\Delta$ F702	1-532-259-00	FUSE, TIME-LAG (T1.6AL) (WR735S:AEP, G, AUS)	
$\Delta$ F703	1-532-259-00	FUSE, TIME-LAG (T1.6AL) (WR735S:AEP, G, AUS)	
$\Delta$ F704	1-532-743-11	FUSE, GLASS TUBE (2A/125V) (WR735S:Canadian, WR701ES)	
$\Delta$ F705	1-532-743-11	FUSE, GLASS TUBE (2A/125V) (WR735S:Canadian, WR701ES)	
$\Delta$ T701	1-450-869-11	TRANSFORMER, POWER (WR735S:Canadian, WR701ES)	
$\Delta$ T701	1-450-870-11	TRANSFORMER, POWER (WR735S:AEP, G, AUS)	

## 6-2. FRONT PANEL SECTION

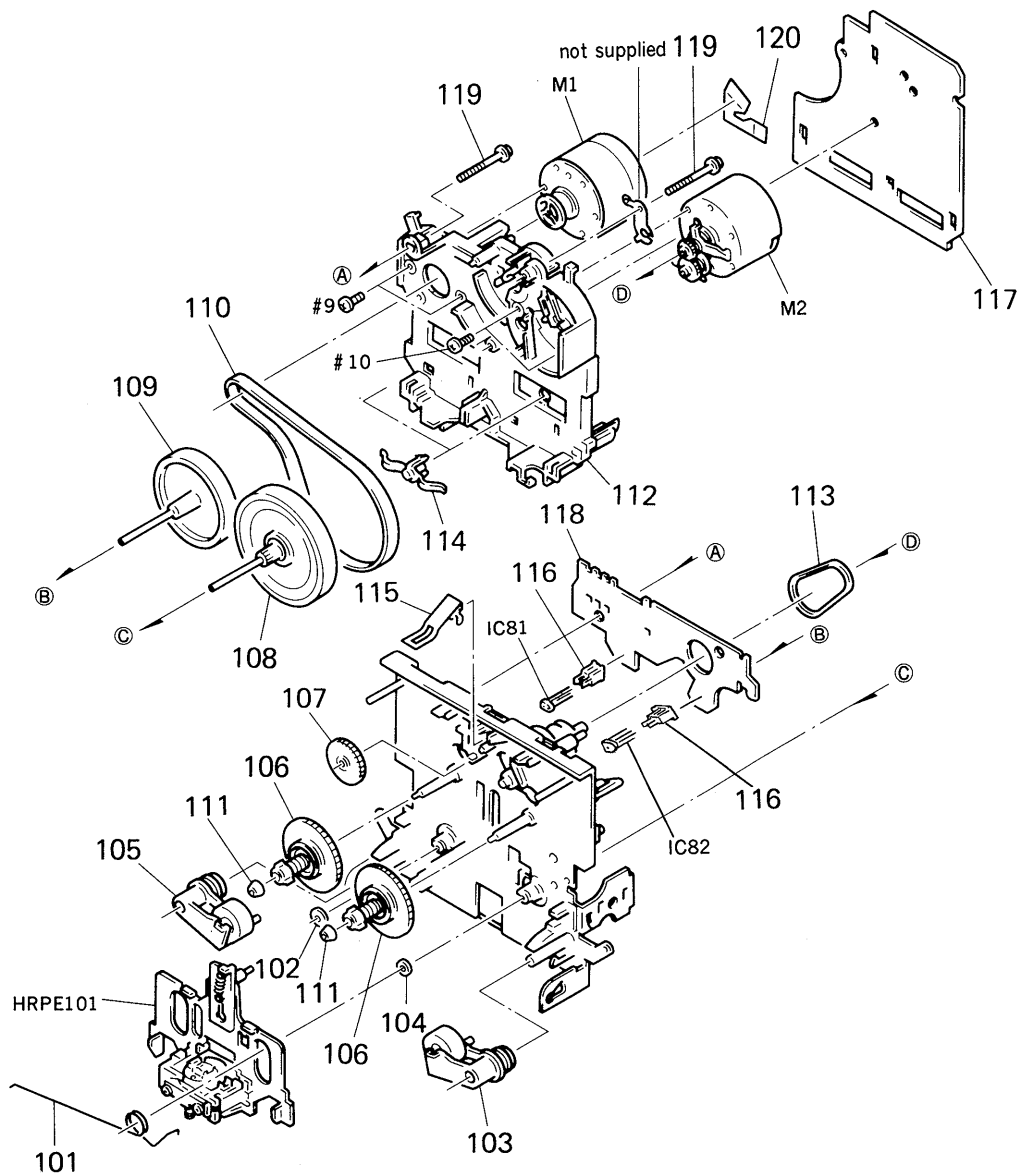
- ▲ A: PANEL board
- ▲ D: SW (B) board
- ▲ F: SW (A) board
- ▲ G: POWER SW board
- ▲ H: H. P. board



Ref. No.	Part No.	Description	Remark
51	3-377-334-01	KNOB (REC)	
52	3-367-431-01	KNOB (BAL)	
53	3-380-950-01	KNOB (VOL)	
54	4-942-568-01	EMBLEM (NO. 5), SONY	
55	3-387-820-11	PANEL, FRONT (WR735S:Canadian)	
56	3-387-820-21	PANEL, FRONT (WR735S:AEP, G, AUS)	
57	X-3366-923-1	PANEL (BASE) ASSY	
58	3-387-823-01	WINDOW (M) (WR735S:AEP, G, AUS)	
59	3-387-823-11	WINDOW (M) (WR735S:Canadian)	
60	3-377-329-11	BUTTON (COUNTER)	
61	3-354-932-01	BUTTON (POWER)	
62	3-387-825-01	BUTTON (CONTROL)	
63	X-3340-195-1	HOLDER (R) ASSY, CASSETTE	
64	3-354-960-01	SPRING (LOADING R), TORSION	
65	3-354-962-01	SPRING (EJ SAFETY SPRING R)	
66	3-354-956-01	LEVER (EJ SAFETY LEVER R)	
67	3-354-963-01	DAMPER	
68	1-575-905-11	WIRE, FLAT TYPE (9 CORE)	
69	4-951-620-01	SCREW (2.6X8), +BVTP	
* 70	3-354-954-01	LEVER (LOCK LEVER R)	
71	3-354-957-01	JOINT (LOCK LEVER)	
72	1-690-589-31	WIRE, FLAT TYPE (13 CORE)	
73	3-354-963-01	DAMPER	

Ref. No.	Part No.	Description	Remark
71	1-690-729-11	WIRE, FLAT TYPE (27 CORE)	
* 72	A-2007-029-A	PANEL BOARD, COMPLETE (WR735S:Canadian, WR701ES)	
* 72	A-2007-030-A	PANEL BOARD, COMPLETE (WR735S:AEP, G, AUS)	
73	1-575-905-11	WIRE, FLAT TYPE (9 CORE)	
74	3-354-959-01	SPRING (LOADING L), TORSION	
75	3-356-935-01	SPRING	
76	3-354-961-01	SPRING (EJ SAFETY SPRING L)	
77	3-354-955-01	LEVER (EJ SAFETY LEVER L)	
* 78	3-354-953-01	LEVER (LOCK LEVER L)	
79	3-354-957-01	JOINT (LOCK LEVER)	
80	X-3340-194-1	HOLDER (L) ASSY, CASSETTE	
81	3-377-328-01	BUTTON (EJECT)	
82	3-387-822-01	SLIDER (EJECT)	
83	3-382-382-01	SPRING, COMPRESSION	
84	1-590-241-11	WIRE, FLAT TYPE (7 CORE)	
85	1-590-241-11	WIRE, FLAT TYPE (11 CORE)	
86	4-922-518-01	KNOB (TIMER)	
87	3-380-952-01	BUTTON	
88	3-308-823-11	SPRING	
89	3-308-823-11	SPRING	
VFD901	1-517-162-11	INDICATOR TUBE, FLUORESCENT	

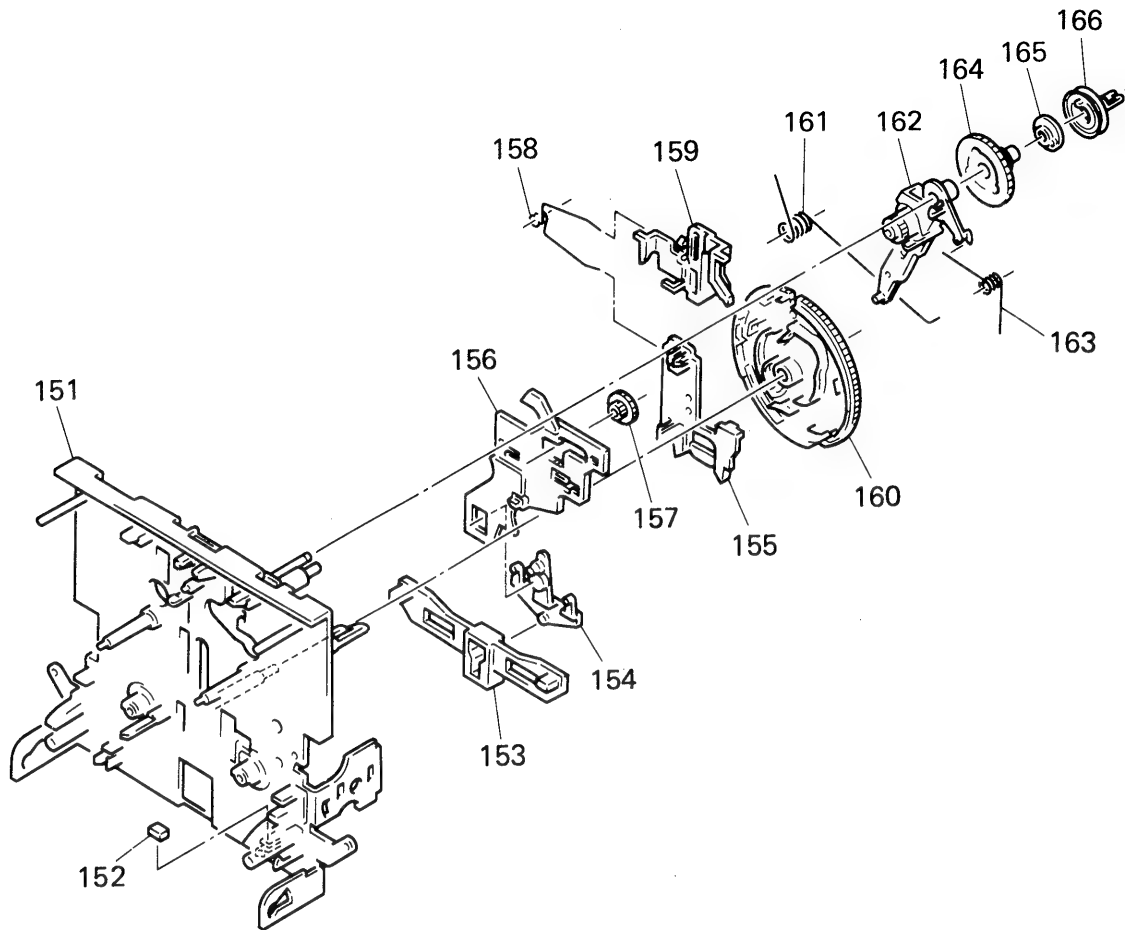
**6-3. MECHANISM SECTION (1)**  
**(DECK A, B: TCM-190RB11C)**



Ref. No.	Part No.	Description	Remark
101	3-359-455-01	SPRING, TORSION	
102	3-356-714-01	WASHER	
103	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY	
104	3-356-713-01	WASHER	
105	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY	
106	X-3362-078-1	TABLE ASSY (B), REEL	
107	3-359-424-01	GEAR (REV GEAR)	
108	X-3359-406-1	FLYWHEEL (FWD) ASSY	
109	X-3359-410-1	FLYWHEEL (REV) ASSY	
110	3-359-417-01	BELT (FLAT), CAPSTAN	
111	3-362-308-01	CAP (REEL)	
* 112	3-359-436-01	BASE (THRUST RETAINER), FITTING	
113	3-359-466-01	BELT (FR), SQUARE	

Ref. No.	Part No.	Description	Remark
114	3-575-321-00	RETAINER, THRUST, CAPSTAN	
115	3-359-430-01	SPRING (CASSETTE RETAINER), LEAF	
116	3-343-419-01	HOLDER (S SENSOR A)	
* 117	A-2006-401-A	MD HX BOARD, COMPLETE	
118	1-634-841-14	SW-A BOARD	
119	3-359-414-01	SCREW (+PTPW 2X23)	
120	1-638-983-11	MOTOR FLEXIBLE BOARD	
HRPE101	A-2003-838-F	DECK ASSY, HEAD (RECORD/PLAYBACK/ERASE)	
IC81	8-719-710-03	PHOTO REFLECTOR NJL5165K-B (H1)	
IC82	8-719-710-03	PHOTO REFLECTOR NJL5165K-B (H1)	
M1	X-3365-377-1	MOTOR (CAPSTAN) ASSY	
M2	X-3363-501-1	MOTOR (REEL) ASSY	

**6-4. MECHANISM SECTION (2)**  
**(DECK A, B: TCM-190RB11C)**



Ref.No.	Part No.	Description	Remark
151	X-3359-415-1	CHASSIS ASSY, MECHANICAL	
152	3-359-469-01	SPACER	
* 153	3-359-425-01	SLIDER (REVERSE SLIDER)	
154	3-359-426-01	LEVER (REVERSE LEVER)	
* 155	3-359-427-01	SLIDER (REVERSE SLIDER)	
* 156	3-359-415-01	SLIDER (TRIGGER SLIDER)	
157	3-359-448-01	GEAR (TRIGGER)	
158	3-359-454-01	SPRING, TORSION	

Ref.No.	Part No.	Description	Remark
159	3-359-429-01	SLIDER (BRAKE PLATE)	
160	3-359-420-01	GEAR (CAM GEAR)	
161	3-359-456-01	SPRING (TRIGGER SPRING), TORSION	
162	X-3359-405-1	LEVER (FR ARM) ASSY	
163	3-359-453-01	SPRING (FR ARM), TORSION	
164	3-359-419-01	GEAR (FR GEAR)	
165	3-359-421-01	CLUTCH (REEL DISK)	
166	3-359-418-01	PULLEY (FR PULLEY)	

# SECTION 7

## ELECTRICAL PARTS LIST

## NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA.:  $\mu$ A. uPA.:  $\mu$ PA.  
uPB.:  $\mu$ PB. uPC.:  $\mu$ PC. uPD.:  $\mu$ PD.
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H

When indicating parts by reference number, please include the board.

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- Abbreviations  
G : German model  
AUS : Australian model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-2006-954-A	DOLBY (S) BOARD, COMPLETE *****		C36	1-165-319-11	CERAMIC CHIP 0.1uF	50V
		< CAPACITOR >		C37	1-164-222-11	CERAMIC CHIP 0.22uF	25V
C1	1-164-222-11	CERAMIC CHIP 0.22uF	25V	C38	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V
C2	1-135-177-21	TANTALUM CHIP 1uF	20% 20V	C39	1-104-555-11	FILM CHIP 0.022uF	5% 16V
C3	1-104-558-91	FILM CHIP 0.039uF	5% 16V	C40	1-104-563-11	FILM CHIP 0.1uF	5% 16V
C4	1-163-007-11	CERAMIC CHIP 680PF	10% 50V			< CONNECTOR >	
C5	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	* CN1	1-537-473-11	TERMINAL (LEAD PIN)	
		< IC >				< IC >	
C6	1-164-717-11	CERAMIC CHIP 0.0082uF	5% 50V	IC1	8-752-056-51	IC CXA1417Q	
C7	1-164-222-11	CERAMIC CHIP 0.22uF	25V	IC2	8-759-711-85	IC NJM4580E-D	
C8	1-104-562-11	FILM CHIP 0.082uF	5% 16V			< RESISTOR >	
C9	1-104-553-11	FILM CHIP 0.015uF	5% 16V	R1	1-216-013-00	METAL CHIP 33 5% 1/10W	
C10	1-165-319-11	CERAMIC CHIP 0.1uF	50V	R2	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
C11	1-135-145-11	TANTALUM CHIP 0.47uF	10% 35V	R3	1-216-681-11	METAL CHIP 18K 0.5% 1/10W	
C12	1-164-222-11	CERAMIC CHIP 0.22uF	25V	R4	1-218-774-11	METAL CHIP 820K 0.50% 1/10W	
C13	1-165-319-11	CERAMIC CHIP 0.1uF	50V	R5	1-216-668-11	METAL CHIP 5.1K 0.5% 1/10W	
C14	1-162-568-11	CERAMIC CHIP 0.33uF	10% 16V				
C15	1-104-562-11	FILM CHIP 0.082uF	5% 16V	R6	1-216-656-11	METAL CHIP 1.6K 0.5% 1/10W	
C16	1-135-145-11	TANTALUM CHIP 0.47uF	10% 35V	R7	1-216-657-11	METAL CHIP 1.8K 0.5% 1/10W	
C17	1-165-319-11	CERAMIC CHIP 0.1uF	50V	R8	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
C18	1-164-222-11	CERAMIC CHIP 0.22uF	25V	R9	1-216-058-00	METAL GLAZE 2.4K 5% 1/10W	
C19	1-163-035-00	CERAMIC CHIP 0.047uF	50V	R10	1-216-654-11	METAL CHIP 1.3K 0.5% 1/10W	
C20	1-104-553-11	FILM CHIP 0.015uF	5% 16V				
C21	1-164-717-11	CERAMIC CHIP 0.0082uF	5% 50V	R11	1-216-013-00	METAL CHIP 33 5% 1/10W	
C22	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	R12	1-216-017-00	METAL CHIP 47 5% 1/10W	
C23	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V	R13	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
C24	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	R14	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
C25	1-163-012-00	CERAMIC CHIP 0.0018uF	10% 50V	R15	1-216-058-00	METAL GLAZE 2.4K 5% 1/10W	
C26	1-104-558-91	FILM CHIP 0.039uF	5% 16V	R16	1-216-013-00	METAL CHIP 33 5% 1/10W	
C27	1-163-012-00	CERAMIC CHIP 0.0018uF	10% 50V	R17	1-216-017-00	METAL CHIP 47 5% 1/10W	
C28	1-163-012-00	CERAMIC CHIP 0.0018uF	10% 50V	R18	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
C29	1-104-563-11	FILM CHIP 0.1uF	5% 16V	R19	1-216-656-11	METAL CHIP 1.6K 0.5% 1/10W	
C30	1-135-145-11	TANTALUM CHIP 0.47uF	10% 35V	R20	1-216-668-11	METAL CHIP 5.1K 0.5% 1/10W	
C31	1-104-555-11	FILM CHIP 0.022uF	5% 16V	R21	1-218-774-11	METAL CHIP 820K 0.50% 1/10W	
C32	1-104-563-11	FILM CHIP 0.1uF	5% 16V	R22	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
C33	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V	R23	1-216-678-11	METAL CHIP 13K 0.5% 1/10W	
C34	1-104-563-11	FILM CHIP 0.1uF	5% 16V	R24	1-216-673-11	METAL CHIP 8.2K 0.5% 1/10W	
C35	1-163-012-00	CERAMIC CHIP 0.0018uF	10% 50V	R25	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	



Ref. No.	Part No.	Description	Remark			
R26	1-216-676-11	METAL CHIP	11K	0.5%	1/10W	
R27	1-216-668-11	METAL CHIP	5.1K	0.5%	1/10W	
R28	1-216-697-11	METAL CHIP	82K	0.5%	1/10W	
R29	1-216-668-11	METAL CHIP	5.1K	0.5%	1/10W	
R30	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W	
R31	1-216-680-11	METAL CHIP	16K	0.5%	1/10W	
R32	1-216-685-11	METAL CHIP	27K	0.5%	1/10W	
R33	1-216-080-00	METAL CHIP	20K	5%	1/10W	
R34	1-216-684-11	METAL CHIP	24K	0.5%	1/10W	
R35	1-216-084-00	METAL CHIP	30K	5%	1/10W	
R36	1-216-084-00	METAL CHIP	30K	5%	1/10W	
R37	1-216-074-00	METAL CHIP	11K	5%	1/10W	
R38	1-216-086-00	METAL GLAZE	36K	5%	1/10W	
R39	1-216-066-00	METAL CHIP	5.1K	5%	1/10W	
R40	1-216-084-00	METAL CHIP	30K	5%	1/10W	
R41	1-216-078-00	METAL GLAZE	16K	5%	1/10W	
R42	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R43	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R44	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R45	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R53	1-216-058-00	METAL GLAZE	2.4K	5%	1/10W	
R54	1-216-675-11	METAL CHIP	10K	0.5%	1/10W	
R55	1-216-666-11	METAL CHIP	4.3K	0.5%	1/10W	
*****						
*	A-2007-028-A MAIN BOARD, COMPLETE					
	(WR735S:Canadian, WR701ES)					
*	A-2007-057-A MAIN BOARD, COMPLETE (WR735S:AEP, G, AUS)					
	*****					
	7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3					
	7-682-547-09 SCREW +BVTT 3X6 (S)					
	< CAPACITOR >					
C102	1-130-476-00	MYLAR	0.0027uF	5%	50V	
C104	1-124-925-11	ELECT	2.2uF	20%	100V	
C105	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C106	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C107	1-136-174-00	FILM	0.56uF	5%	50V	
C108	1-136-171-00	FILM	0.33uF	5%	50V	
C109	1-124-907-11	ELECT	10uF	20%	50V	
C110	1-124-925-11	ELECT	2.2uF	20%	100V	
C121	1-124-903-11	ELECT	1uF	20%	50V	
C122	1-124-903-11	ELECT	1uF	20%	50V	
C123	1-124-443-00	ELECT	100uF	20%	10V	
C124	1-124-902-00	ELECT	0.47uF	20%	50V	
C125	1-164-159-11	CERAMIC	0.1uF		50V	
C126	1-123-382-00	ELECT	3.3uF	20%	100V	
C127	1-124-927-11	ELECT	4.7uF	20%	100V	
C128	1-124-925-11	ELECT	2.2uF	20%	100V	

Ref. No.	Part No.	Description	Remark			
C129	1-124-925-11	ELECT	2.2uF	20%	100V	
C130	1-124-907-11	ELECT	10uF	20%	50V	
C132	1-164-159-11	CERAMIC	0.1uF		50V	
C135	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C136	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C141	1-162-283-31	CERAMIC	120PF	10%	50V	
C151	1-124-925-11	ELECT	2.2uF	20%	100V	
C152	1-124-907-11	ELECT	10uF	20%	50V	
C153	1-124-916-11	ELECT	22uF	20%	63V	
C154	1-124-907-11	ELECT	10uF	20%	50V	
C181	1-123-382-00	ELECT	3.3uF	20%	100V	
C183	1-124-902-00	ELECT	0.47uF	20%	50V	
C184	1-124-903-11	ELECT	1uF	20%	50V	
C186	1-124-903-11	ELECT	1uF	20%	50V	
C187	1-124-903-11	ELECT	1uF	20%	50V	
C202	1-130-476-00	MYLAR	0.0027uF	5%	50V	
C204	1-124-925-11	ELECT	2.2uF	20%	100V	
C205	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C206	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C207	1-136-174-00	FILM	0.56uF	5%	50V	
C208	1-136-171-00	FILM	0.33uF	5%	50V	
C209	1-124-907-11	ELECT	10uF	20%	50V	
C210	1-124-925-11	ELECT	2.2uF	20%	100V	
C221	1-124-903-11	ELECT	1uF	20%	50V	
C222	1-124-903-11	ELECT	1uF	20%	50V	
C223	1-124-443-00	ELECT	100uF	20%	10V	
C224	1-124-902-00	ELECT	0.47uF	20%	50V	
C225	1-164-159-11	CERAMIC	0.1uF		50V	
C226	1-123-382-00	ELECT	3.3uF	20%	100V	
C227	1-124-927-11	ELECT	4.7uF	20%	100V	
C228	1-124-925-11	ELECT	2.2uF	20%	100V	
C229	1-124-925-11	ELECT	2.2uF	20%	100V	
C230	1-124-907-11	ELECT	10uF	20%	50V	
C232	1-164-159-11	CERAMIC	0.1uF		50V	
C235	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C236	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C241	1-162-283-31	CERAMIC	120PF	10%	50V	
C251	1-124-925-11	ELECT	2.2uF	20%	100V	
C252	1-124-907-11	ELECT	10uF	20%	50V	
C253	1-124-916-11	ELECT	22uF	20%	63V	
C254	1-124-907-11	ELECT	10uF	20%	50V	
C281	1-123-382-00	ELECT	3.3uF	20%	100V	
C283	1-124-902-00	ELECT	0.47uF	20%	50V	
C284	1-124-903-11	ELECT	1uF	20%	50V	
C286	1-124-903-11	ELECT	1uF	20%	50V	
C287	1-124-903-11	ELECT	1uF	20%	50V	
C501	1-124-443-00	ELECT	100uF	20%	10V	
C502	1-124-443-00	ELECT	100uF	20%	10V	
C503	1-124-903-11	ELECT	1uF	20%	50V	

# MAIN

Ref. No.	Part No.	Description	Remark
C521	1-126-916-11	ELECT	1000uF 20% 6.3V
C522	1-124-925-11	ELECT	2.2uF 20% 100V
C523	1-124-902-00	ELECT	0.47uF 20% 50V
C524	1-124-916-11	ELECT	22uF 20% 63V
C526	1-124-443-00	ELECT	100uF 20% 10V
C527	1-124-443-00	ELECT	100uF 20% 10V
C528	1-124-902-00	ELECT	0.47uF 20% 50V
C551	1-124-907-11	ELECT	10uF 20% 50V
C552	1-124-907-11	ELECT	10uF 20% 50V
C553	1-124-927-11	ELECT	4.7uF 20% 100V
C554	1-124-927-11	ELECT	4.7uF 20% 100V
C561	1-136-161-00	FILM	0.047uF 5% 50V
C562	1-136-164-00	FILM	0.082uF 5% 50V
C563	1-130-476-00	MYLAR	0.0027uF 5% 50V
C564	1-130-474-00	MYLAR	0.0018uF 5% 50V
C592	1-126-103-11	ELECT	470uF 20% 16V
C621	1-124-907-11	ELECT	10uF 20% 50V
C631	1-124-907-11	ELECT	10uF 20% 50V
C651	1-124-916-11	ELECT	22uF 20% 63V
C702	1-124-925-11	ELECT	2.2uF 20% 100V
C703	1-124-772-11	ELECT	10000uF 20% 25V
C704	1-124-772-11	ELECT	10000uF 20% 25V
C705	1-124-907-11	ELECT	10uF 20% 50V
C706	1-124-472-11	ELECT	470uF 20% 10V
C707	1-124-907-11	ELECT	10uF 20% 50V
C708	1-126-929-11	ELECT	4700uF 20% 10V
C709	1-126-926-11	ELECT	1000uF 20% 10V
C710	1-124-122-11	ELECT	100uF 20% 50V
C711	1-124-122-11	ELECT	100uF 20% 50V
C712	1-124-927-11	ELECT	4.7uF 20% 100V
C801	1-124-472-11	ELECT	470uF 20% 10V
C802-804			
	1-164-159-11	CERAMIC	0.1uF 50V
C811	1-124-927-11	ELECT	4.7uF 20% 100V
C812	1-124-477-11	ELECT	47uF 20% 25V
C813	1-124-477-11	ELECT	47uF 20% 25V
C820	1-124-902-00	ELECT	0.47uF 20% 50V
C981	1-164-159-11	CERAMIC	0.1uF 50V
C982	1-162-288-31	CERAMIC	330PF 10% 50V
C991	1-164-159-11	CERAMIC	0.1uF 50V
C992	1-162-288-31	CERAMIC	330PF 10% 50V

## < CONNECTOR >

CN31A	1-750-425-11	CONNECTOR, FFC/FPC 20P
* CN31B	1-580-784-11	CONNECTOR, BOARD TO BOARD
* CN33B	1-580-784-11	CONNECTOR, BOARD TO BOARD
CN81A	1-750-414-11	CONNECTOR, FFC/FPC 9P
CN81B	1-750-414-11	CONNECTOR, FFC/FPC 9P
CN901	1-750-418-11	CONNECTOR, FFC/FPC 13P

Ref. No.	Part No.	Description	Remark
CN902	1-750-432-11	CONNECTOR, FFC/FPC 27P	
CN903	1-750-410-11	CONNECTOR, FFC/FPC 5P	
CN904	1-750-410-11	CONNECTOR, FFC/FPC 5P	
CNP521	1-506-468-11	PIN, CONNECTOR 3P	
CNP702	1-564-510-11	PLUG, CONNECTOR 7P	

## < COMPOSITION CIRCUIT BLOCK >

CP571	1-232-946-11	COMPOSITION CIRCUIT BLOCK
CP581	1-232-946-11	COMPOSITION CIRCUIT BLOCK

## < DIODE >

D121	8-719-987-63	DIODE 1N4148M
D221	8-719-987-63	DIODE 1N4148M
D502	8-719-987-63	DIODE 1N4148M
D505	8-719-933-54	DIODE HZS9A2L
D551-554		
	8-719-200-77	DIODE 10E2N
D561	8-719-987-63	DIODE 1N4148M
D562	8-719-987-63	DIODE 1N4148M
D601	8-719-987-63	DIODE 1N4148M
D611	8-719-987-63	DIODE 1N4148M
D702-708		
	8-719-200-77	DIODE 10E2N
D709	8-719-987-63	DIODE 1N4148M
D710	8-719-000-78	DIODE UZL-7L2
D711	8-719-933-33	DIODE HZS6A1L
D712	8-719-933-33	DIODE HZS6A1L
D713	8-719-987-63	DIODE 1N4148M
D714	8-719-987-63	DIODE 1N4148M
D715	8-719-000-93	DIODE UZL-7H1
D716	8-719-933-33	DIODE HZS6A1L
D717	8-719-987-63	DIODE 1N4148M
D801	8-719-987-63	DIODE 1N4148M
D802	8-719-987-63	DIODE 1N4148M

## < IC >

IC151	8-759-140-53	IC UP14053BC
IC251	8-759-140-53	IC UP14053BC
IC501	8-752-055-10	IC CXA1332M
IC502	8-752-058-57	IC CXA1599Q
IC503	8-759-145-58	IC uPC4558C
IC504	8-759-145-58	IC uPC4558C
IC505	8-759-916-14	IC SN74HC04N
IC506	8-759-916-14	IC SN74HC04N
IC507	8-759-300-71	IC HD14053BFP
IC508	8-759-140-53	IC UP14053BC
IC509	8-752-055-61	IC CXA1578P
IC511	8-759-635-26	IC M5283P
IC702	8-759-634-51	IC M5218AP

Ref. No.	Part No.	Description	Remark
IC801	8-752-841-99	IC CXP82316-019Q	
IC802	8-759-634-84	IC M50255P	
IC803	8-759-000-48	IC MC14052BCP	
IC804	8-759-207-05	IC TA7272P	
IC805	8-759-009-06	IC MC14052BF	
IC811	8-759-165-82	IC PST600E-T	
		< JACK >	
J501	1-565-258-11	JACK, PIN 4P (LINE)	
		< COIL >	
* L981	1-420-872-00	COIL, AIR CORE	
* L991	1-420-872-00	COIL, AIR CORE	
		< FILTER >	
LPF101	1-231-388-00	FILTER, LOW PASS	
LPF201	1-231-388-00	FILTER, LOW PASS	
		< TRANSISTOR >	
Q101	8-729-900-80	TRANSISTOR DTC114ES	
Q121	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q122	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q141	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q201	8-729-900-80	TRANSISTOR DTC114ES	
Q221	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q222	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q241	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q501	8-729-900-65	TRANSISTOR DTA144ES	
Q504	8-729-900-65	TRANSISTOR DTA144ES	
Q505	8-729-900-80	TRANSISTOR DTC114ES	
Q506	8-729-900-80	TRANSISTOR DTC114ES	
Q507	8-729-900-65	TRANSISTOR DTA144ES	
Q521	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q522	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q523	8-729-900-80	TRANSISTOR DTC114ES	
Q524	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q525	8-729-900-65	TRANSISTOR DTA144ES	
Q526	8-729-900-65	TRANSISTOR DTA144ES	
Q541	8-729-900-65	TRANSISTOR DTA144ES	
Q561	8-729-900-74	TRANSISTOR DTC143TS	
Q562	8-729-900-74	TRANSISTOR DTC143TS	
Q563	8-729-900-65	TRANSISTOR DTA144ES	
Q564	8-729-900-65	TRANSISTOR DTA144ES	
Q570	8-729-900-89	TRANSISTOR DTC144ES	
Q571	8-729-900-65	TRANSISTOR DTA144ES	
Q601	8-729-900-89	TRANSISTOR DTC144ES	
Q602	8-729-900-89	TRANSISTOR DTC144ES	
Q603	8-729-900-65	TRANSISTOR DTA144ES	

Ref. No.	Part No.	Description	Remark
Q604	8-729-900-65	TRANSISTOR DTA144ES	
Q605	8-729-900-61	TRANSISTOR DTA114ES	
Q611	8-729-900-89	TRANSISTOR DTC144ES	
Q612	8-729-900-89	TRANSISTOR DTC144ES	
Q613	8-729-900-65	TRANSISTOR DTA144ES	
Q614	8-729-900-65	TRANSISTOR DTA144ES	
Q615	8-729-900-61	TRANSISTOR DTA114ES	
Q621	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q631	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q651	8-729-900-61	TRANSISTOR DTA114ES	
Q652	8-729-900-80	TRANSISTOR DTC114ES	
Q653	8-729-900-89	TRANSISTOR DTC144ES	
Q702	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q703	8-729-231-60	TRANSISTOR 2SD1406-YGR	
Q704	8-729-900-74	TRANSISTOR DTC143TS	
Q705	8-729-900-74	TRANSISTOR DTC143TS	
Q706	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q707	8-729-231-60	TRANSISTOR 2SD1406-YGR	
Q708	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q709	8-729-140-04	TRANSISTOR 2SB1116A-L	
Q801	8-729-900-89	TRANSISTOR DTC144ES	
Q804	8-729-801-93	TRANSISTOR 2SD1387-3	
Q805	8-729-801-93	TRANSISTOR 2SD1387-3	
Q806	8-729-900-80	TRANSISTOR DTC114ES	
Q807	8-729-620-05	TRANSISTOR 2SC2603-EF	
		< RESISTOR >	
R101	1-249-461-11	CARBON 18K 5% 1/4W	
R102	1-247-838-00	CARBON 2K 5% 1/4W	
R103	1-249-421-11	CARBON 2.2K 5% 1/4W	
R104	1-249-441-11	CARBON 100K 5% 1/4W	
R105	1-249-425-11	CARBON 4.7K 5% 1/4W	
R106	1-247-840-00	CARBON 2.4K 5% 1/4W	
R107	1-247-864-11	CARBON 24K 5% 1/4W	
R108	1-249-414-11	CARBON 560 5% 1/4W	
R109	1-249-437-11	CARBON 47K 5% 1/4W	
R121	1-249-421-11	CARBON 2.2K 5% 1/4W	
R122	1-249-421-11	CARBON 2.2K 5% 1/4W	
R123	1-249-441-11	CARBON 100K 5% 1/4W	
R124	1-247-713-11	CARBON 1K 5% 1/4W	
R125	1-249-429-11	CARBON 10K 5% 1/4W	
R126	1-247-887-00	CARBON 220K 5% 1/4W	
R127	1-247-713-11	CARBON 1K 5% 1/4W	
R128	1-249-437-11	CARBON 47K 5% 1/4W	
R129	1-249-439-11	CARBON 68K 5% 1/4W	
R130	1-249-409-11	CARBON 220 5% 1/4W	
R131	1-249-441-11	CARBON 100K 5% 1/4W	
R132	1-247-832-11	CARBON 1.1K 5% 1/4W	
R133	1-249-441-11	CARBON 100K 5% 1/4W	

# MAIN

Ref. No.	Part No.	Description	Remark		
R134	1-249-441-11	CARBON	100K	5%	1/4W
R141	1-247-864-11	CARBON	24K	5%	1/4W
R142	1-249-424-11	CARBON	3.9K	5%	1/4W
R143	1-249-429-11	CARBON	10K	5%	1/4W
R152	1-249-436-11	CARBON	39K	5%	1/4W
R153	1-247-858-11	CARBON	13K	5%	1/4W
R154	1-249-436-11	CARBON	39K	5%	1/4W
R155	1-247-858-11	CARBON	13K	5%	1/4W
R156	1-249-429-11	CARBON	10K	5%	1/4W
R157	1-247-862-11	CARBON	20K	5%	1/4W
R158	1-249-437-11	CARBON	47K	5%	1/4W
R171	1-249-424-11	CARBON	3.9K	5%	1/4W
R172	1-247-854-11	CARBON	9.1K	5%	1/4W
R181	1-249-425-11	CARBON	4.7K	5%	1/4W
R183	1-247-852-11	CARBON	7.5K	5%	1/4W
R186	1-249-426-11	CARBON	5.6K	5%	1/4W
R187	1-249-426-11	CARBON	5.6K	5%	1/4W
R201	1-249-461-11	CARBON	18K	5%	1/4W
R202	1-247-838-00	CARBON	2K	5%	1/4W
R203	1-249-421-11	CARBON	2.2K	5%	1/4W
R204	1-249-441-11	CARBON	100K	5%	1/4W
R205	1-249-425-11	CARBON	4.7K	5%	1/4W
R206	1-247-840-00	CARBON	2.4K	5%	1/4W
R207	1-247-864-11	CARBON	24K	5%	1/4W
R208	1-249-414-11	CARBON	560	5%	1/4W
R209	1-249-437-11	CARBON	47K	5%	1/4W
R221	1-249-421-11	CARBON	2.2K	5%	1/4W
R222	1-249-421-11	CARBON	2.2K	5%	1/4W
R223	1-249-441-11	CARBON	100K	5%	1/4W
R224	1-247-713-11	CARBON	1K	5%	1/4W
R225	1-249-429-11	CARBON	10K	5%	1/4W
R226	1-247-887-00	CARBON	220K	5%	1/4W
R227	1-247-713-11	CARBON	1K	5%	1/4W
R228	1-249-437-11	CARBON	47K	5%	1/4W
R229	1-249-439-11	CARBON	68K	5%	1/4W
R230	1-249-409-11	CARBON	220	5%	1/4W
R231	1-249-441-11	CARBON	100K	5%	1/4W
R232	1-247-832-11	CARBON	1.1K	5%	1/4W
R233	1-249-441-11	CARBON	100K	5%	1/4W
R234	1-249-441-11	CARBON	100K	5%	1/4W
R241	1-247-864-11	CARBON	24K	5%	1/4W
R242	1-249-424-11	CARBON	3.9K	5%	1/4W
R243	1-249-429-11	CARBON	10K	5%	1/4W
R252	1-249-436-11	CARBON	39K	5%	1/4W
R253	1-247-858-11	CARBON	13K	5%	1/4W
R254	1-249-436-11	CARBON	39K	5%	1/4W
R255	1-247-858-11	CARBON	13K	5%	1/4W
R256	1-249-429-11	CARBON	10K	5%	1/4W
R257	1-247-862-11	CARBON	20K	5%	1/4W

Ref. No.	Part No.	Description	Remark		
R258	1-249-437-11	CARBON	47K	5%	1/4W
R271	1-249-424-11	CARBON	3.9K	5%	1/4W
R272	1-247-854-11	CARBON	9.1K	5%	1/4W
R281	1-249-425-11	CARBON	4.7K	5%	1/4W
R283	1-247-852-11	CARBON	7.5K	5%	1/4W
R286	1-249-426-11	CARBON	5.6K	5%	1/4W
R287	1-249-426-11	CARBON	5.6K	5%	1/4W
R501	1-249-417-11	CARBON	1K	5%	1/4W
R502	1-215-455-00	METAL	27K	1%	1/6W
R503-505					
	1-249-433-11	CARBON	22K	5%	1/4W
R507	1-249-433-11	CARBON	22K	5%	1/4W
R508	1-249-429-11	CARBON	10K	5%	1/4W
R509	1-249-405-11	CARBON	100	5%	1/4W
R521	1-215-455-00	METAL	27K	1%	1/6W
R522	1-212-863-00	FUSIBLE	18	5%	1/4W
R523	1-249-430-11	CARBON	12K	5%	1/4W
R524	1-249-432-11	CARBON	18K	5%	1/4W
R525	1-249-405-11	CARBON	100	5%	1/4W
R526	1-249-437-11	CARBON	47K	5%	1/4W
R527	1-249-433-11	CARBON	22K	5%	1/4W
R528	1-249-413-11	CARBON	470	5%	1/4W
R529	1-249-429-11	CARBON	10K	5%	1/4W
R530	1-247-872-11	CARBON	51K	5%	1/4W
R531	1-249-417-11	CARBON	1K	5%	1/4W
R532	1-249-429-11	CARBON	10K	5%	1/4W
R533	1-249-429-11	CARBON	10K	5%	1/4W
R543	1-249-429-11	CARBON	10K	5%	1/4W
R544	1-249-437-11	CARBON	47K	5%	1/4W
R545	1-249-429-11	CARBON	10K	5%	1/4W
R551	1-249-433-11	CARBON	22K	5%	1/4W
R552	1-249-433-11	CARBON	22K	5%	1/4W
R561	1-247-846-11	CARBON	4.3K	5%	1/4W
R562	1-249-441-11	CARBON	100K	5%	1/4W
R563	1-249-441-11	CARBON	100K	5%	1/4W
R564	1-249-436-11	CARBON	39K	5%	1/4W
R565	1-249-433-11	CARBON	22K	5%	1/4W
R566	1-249-426-11	CARBON	5.6K	5%	1/4W
R570	1-247-868-11	CARBON	36K	5%	1/4W
R571-574					
	1-249-434-11	CARBON	27K	5%	1/4W
R575	1-247-874-11	CARBON	62K	5%	1/4W
R576	1-247-866-11	CARBON	30K	5%	1/4W
R577	1-249-431-11	CARBON	15K	5%	1/4W
R578	1-247-852-11	CARBON	7.5K	5%	1/4W
R579	1-249-421-11	CARBON	2.2K	5%	1/4W
R581-584					
	1-249-434-11	CARBON	27K	5%	1/4W
R585	1-247-874-11	CARBON	62K	5%	1/4W

Ref. No.	Part No.	Description	Remark		
R586	1-247-866-11	CARBON	30K	5%	1/4W
R587	1-249-431-11	CARBON	15K	5%	1/4W
R588	1-247-852-11	CARBON	7.5K	5%	1/4W
R589	1-249-421-11	CARBON	2.2K	5%	1/4W
R601	1-247-862-11	CARBON	20K	5%	1/4W
R602	1-247-850-11	CARBON	6.2K	5%	1/4W
R604	1-249-429-11	CARBON	10K	5%	1/4W
R605	1-249-429-11	CARBON	10K	5%	1/4W
R611	1-247-862-11	CARBON	20K	5%	1/4W
R612	1-247-850-11	CARBON	6.2K	5%	1/4W
R614	1-249-429-11	CARBON	10K	5%	1/4W
R615	1-249-429-11	CARBON	10K	5%	1/4W
R621-623					
	1-249-422-11	CARBON	2.7K	5%	1/4W
R631-633					
	1-249-422-11	CARBON	2.7K	5%	1/4W
R651	1-247-708-11	CARBON	470	5%	1/4W
R652	1-249-429-11	CARBON	10K	5%	1/4W
R653	1-215-455-00	METAL	27K	1%	1/6W
R654	1-249-422-11	CARBON	2.7K	5%	1/4W
R655	1-249-441-11	CARBON	100K	5%	1/4W
R702	1-249-425-11	CARBON	4.7K	5%	1/4W
R703	1-249-425-11	CARBON	4.7K	5%	1/4W
R704	1-249-429-11	CARBON	10K	5%	1/4W
R705	1-249-425-11	CARBON	4.7K	5%	1/4W
R706	1-249-425-11	CARBON	4.7K	5%	1/4W
R707	1-249-427-11	CARBON	6.8K	5%	1/4W
R708	1-249-419-11	CARBON	1.5K	5%	1/4W
R709	1-249-429-11	CARBON	10K	5%	1/4W
R710	1-249-419-11	CARBON	1.5K	5%	1/4W
R711	1-249-425-11	CARBON	4.7K	5%	1/4W
R712	1-249-427-11	CARBON	6.8K	5%	1/4W
R713	1-249-427-11	CARBON	6.8K	5%	1/4W
R714	1-249-417-11	CARBON	1K	5%	1/4W
R715	1-247-844-11	CARBON	3.6K	5%	1/4W
R716	1-249-430-11	CARBON	12K	5%	1/4W
R717	1-249-428-11	CARBON	8.2K	5%	1/4W
R718	1-249-437-11	CARBON	47K	5%	1/4W
R719	1-219-136-11	FUSIBLE	0.22	10%	1/4W
R720	1-249-414-11	CARBON	560	5%	1/4W
R730	1-219-136-11	FUSIBLE	0.22	10%	1/4W
R801	1-249-429-11	CARBON	10K	5%	1/4W
R803	1-249-422-11	CARBON	2.7K	5%	1/4W
R804	1-249-426-11	CARBON	5.6K	5%	1/4W
R805	1-247-852-11	CARBON	7.5K	5%	1/4W
R806	1-247-858-11	CARBON	13K	5%	1/4W
R807	1-249-422-11	CARBON	2.7K	5%	1/4W
R808	1-249-426-11	CARBON	5.6K	5%	1/4W
R809	1-247-852-11	CARBON	7.5K	5%	1/4W

Ref. No.	Part No.	Description	Remark		
R810	1-247-858-11	CARBON	13K	5%	1/4W
R812	1-249-429-11	CARBON	10K	5%	1/4W
R813	1-247-852-11	CARBON	7.5K	5%	1/4W
R814	1-249-429-11	CARBON	10K	5%	1/4W
R815	1-247-852-11	CARBON	7.5K	5%	1/4W
R816	1-249-430-11	CARBON	12K	5%	1/4W
R820	1-247-852-11	CARBON	7.5K	5%	1/4W
R821	1-249-429-11	CARBON	10K	5%	1/4W
R823	1-249-437-11	CARBON	47K	5%	1/4W
R824	1-249-429-11	CARBON	10K	5%	1/4W
R825	1-249-430-11	CARBON	12K	5%	1/4W
R826	1-247-887-00	CARBON	220K	5%	1/4W
R827	1-247-862-11	CARBON	20K	5%	1/4W
R828	1-249-429-11	CARBON	10K	5%	1/4W
R829	1-247-862-11	CARBON	20K	5%	1/4W
R830	1-249-429-11	CARBON	10K	5%	1/4W
R831	1-249-433-11	CARBON	22K	5%	1/4W
R832	1-249-433-11	CARBON	22K	5%	1/4W
R834	1-249-441-11	CARBON	100K	5%	1/4W
R835	1-249-417-11	CARBON	1K	5%	1/4W
R838	1-249-417-11	CARBON	1K	5%	1/4W
R839	1-249-433-11	CARBON	22K	5%	1/4W
R844-848					
	1-249-423-11	CARBON	3.3K	5%	1/4W
R849	1-249-434-11	CARBON	27K	5%	1/4W
R850	1-249-434-11	CARBON	27K	5%	1/4W
R851	1-249-423-11	CARBON	3.3K	5%	1/4W
R852	1-249-434-11	CARBON	27K	5%	1/4W
R853	1-249-434-11	CARBON	27K	5%	1/4W
R854	1-249-423-11	CARBON	3.3K	5%	1/4W
R855	1-249-423-11	CARBON	3.3K	5%	1/4W
R856	1-249-429-11	CARBON	10K	5%	1/4W
R857	1-249-421-11	CARBON	2.2K	5%	1/4W
R858	1-249-421-11	CARBON	2.2K	5%	1/4W
R859	1-249-429-11	CARBON	10K	5%	1/4W
R881	1-249-429-11	CARBON	10K	5%	1/4W
R895	1-249-417-11	CARBON	1K	5%	1/4W
R896	1-249-433-11	CARBON	22K	5%	1/4W
R897	1-249-429-11	CARBON	10K	5%	1/4W
R898	1-249-425-11	CARBON	4.7K	5%	1/4W
R899	1-247-840-00	CARBON	2.4K	5%	1/4W
R981	1-249-430-11	CARBON	12K	5%	1/4W
R982-984					
	1-249-433-11	CARBON	22K	5%	1/4W
R985	1-249-405-11	CARBON	100	5%	1/4W
R991	1-249-430-11	CARBON	12K	5%	1/4W
R992-994					
	1-249-433-11	CARBON	22K	5%	1/4W
R995	1-249-405-11	CARBON	100	5%	1/4W

Ref. No.	Part No.	Description	Remark
< VARIABLE RESISTOR >			
RV171	1-238-600-11	RES, ADJ, CARBON 10K	
RV181	1-238-600-11	RES, ADJ, CARBON 10K	
RV271	1-238-600-11	RES, ADJ, CARBON 10K	
RV281	1-238-600-11	RES, ADJ, CARBON 10K	
< TEST PIN >			
* TP1	1-564-505-11	PLUG, CONNECTOR 2P	
* TP2	1-564-506-11	PLUG, CONNECTOR 3P	
< VIBRATOR >			
X801	1-579-175-11	VIBRATOR, CERAMIC (10MHz)	
*****			
*	A-2006-401-A	MD HX BOARD, COMPLETE	
*****			
< CAPACITOR >			
C11	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C12	1-136-157-00	FILM 0.022uF	5% 50V
C13	1-124-234-00	ELECT 22uF	20% 16V
C18	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C21	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C22	1-136-157-00	FILM 0.022uF	5% 50V
C23	1-124-234-00	ELECT 22uF	20% 16V
C28	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C31-33	1-124-234-00	ELECT 22uF	20% 16V
C51	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C52	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C53	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C54	1-136-601-11	FILM 0.01uF	5% 630V
C56	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C57	1-164-346-11	CERAMIC CHIP 1uF	16V
C71	1-164-346-11	CERAMIC CHIP 1uF	16V
C80	1-124-234-00	ELECT 22uF	20% 16V
C81	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C82	1-136-157-00	FILM 0.022uF	5% 50V
C83	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C84	1-136-478-11	FILM 470PF	5% 630V
C85	1-136-433-11	FILM 100PF	5% 630V
C86	1-163-143-00	CERAMIC CHIP 0.0012uF	5% 50V
C87	1-136-273-91	FILM 75PF	5% 630V
C88	1-163-003-11	CERAMIC CHIP 330PF	10% 50V
C89	1-124-234-00	ELECT 22uF	20% 16V
C90	1-107-045-00	MICA 3.9PF	500V
C91	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C92	1-136-157-00	FILM 0.022uF	5% 50V
C93	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V

Ref. No.	Part No.	Description	Remark
C94	1-136-478-11	FILM 470PF	5% 630V
C95	1-136-433-11	FILM 100PF	5% 630V
C96	1-163-143-00	CERAMIC CHIP 0.0012uF	5% 50V
C97	1-136-273-91	FILM 75PF	5% 630V
C98	1-163-003-11	CERAMIC CHIP 330PF	10% 50V
C99	1-164-005-11	CERAMIC CHIP 0.47uF	25V
< CONNECTOR >			
* CNP31	1-580-782-11	CONNECTOR, BOARD TO BOARD	
* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P	
* CNP33	1-580-782-11	CONNECTOR, BOARD TO BOARD	
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	
* CNP72	1-580-411-11	SOCKET, CONNECTOR 4P	
< DIODE >			
D31	8-719-404-46	DIODE MA110	
< IC >			
IC31	8-759-106-02	IC uPC4570G2	
IC81	8-759-106-56	IC uPC1297CA	
< INDUCTOR >			
L81	1-410-780-11	INDUCTOR 27mH	
L91	1-410-780-11	INDUCTOR 27mH	
< TRANSISTOR >			
Q51-53	8-729-808-01	TRANSISTOR 2SD1622-S	
Q71	8-729-216-22	TRANSISTOR 2SA1162-G	
< RESISTOR >			
R11	1-216-099-00	METAL CHIP 120K	5% 1/10W
R12	1-216-025-00	METAL CHIP 100	5% 1/10W
R13	1-216-100-00	METAL GLAZE 130K	5% 1/10W
R14	1-216-067-00	METAL CHIP 5.6K	5% 1/10W
R21	1-216-099-00	METAL CHIP 120K	5% 1/10W
R22	1-216-025-00	METAL CHIP 100	5% 1/10W
R23	1-216-100-00	METAL GLAZE 130K	5% 1/10W
R24	1-216-067-00	METAL CHIP 5.6K	5% 1/10W
R31	1-216-033-00	METAL CHIP 220	5% 1/10W
R32	1-216-033-00	METAL CHIP 220	5% 1/10W
R51	1-216-097-00	METAL CHIP 100K	5% 1/10W
R52	1-216-097-00	METAL CHIP 100K	5% 1/10W
R53	1-216-073-00	METAL CHIP 10K	5% 1/10W
R54	1-216-309-00	METAL CHIP 5.6	5% 1/10W
R55	1-216-309-00	METAL CHIP 5.6	5% 1/10W
R57	1-216-298-00	METAL CHIP 2.2	5% 1/10W
R71	1-216-082-00	METAL GLAZE 24K	5% 1/10W

Ref. No.	Part No.	Description	Remark		
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W
R81	1-216-073-00	METAL CHIP	10K	5%	1/10W
R82	1-216-085-00	METAL CHIP	33K	5%	1/10W
R83	1-216-001-00	METAL CHIP	10	5%	1/10W
R84	1-216-101-00	METAL CHIP	150K	5%	1/10W
R85	1-216-075-00	METAL CHIP	12K	5%	1/10W
R91	1-216-073-00	METAL CHIP	10K	5%	1/10W
R92	1-216-085-00	METAL CHIP	33K	5%	1/10W
R93	1-216-001-00	METAL CHIP	10	5%	1/10W
R94	1-216-101-00	METAL CHIP	150K	5%	1/10W
R95	1-216-075-00	METAL CHIP	12K	5%	1/10W

## &lt; VARIABLE RESISTOR &gt;

RV11	1-238-012-11	RES, ADJ, CARBON 1K
RV21	1-238-012-11	RES, ADJ, CARBON 1K
RV71	1-241-630-11	RES, ADJ, CARBON 10K
RV72	1-241-630-11	RES, ADJ, CARBON 10K
RV81	1-241-122-11	RES, ADJ, CARBON 22K

RV91	1-241-122-11	RES, ADJ, CARBON 22K
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## &lt; RELAY &gt;

RY31	1-515-913-11	RELAY
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## &lt; TRANSFORMER &gt;

T51	1-406-417-11	COIL, BIAS OSCILLATION
T81	1-433-381-11	TRANSFORMER, BIAS OSCILLATOR
T91	1-433-381-11	TRANSFORMER, BIAS OSCILLATOR

## &lt; TEST PIN &gt;

* TP81	1-568-449-11	HOUSING, CONNECTOR(PC BOARD) 3P
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Ref. No.	Part No.	Description	Remark		
*	A-2007-029-A	PANEL BOARD, COMPLETE	(WR735S:Canadian, WR701ES)		
*	A-2007-030-A	PANEL BOARD, COMPLETE	(WR735S:AEP, G, AUS)		

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TRANSFORMER BOARD

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SW(B) BOARD

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CONNECTOR BOARD

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SW(A) BOARD

\*\*\*\*\*

POWER SW BOARD

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H. P. BOARD

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1-533-183-11 HOLDER, FUSE

## &lt; CAPACITOR &gt;

C185	1-162-294-31	CERAMIC	0.001uF	10%	50V
C285	1-162-294-31	CERAMIC	0.001uF	10%	50V
C591	1-126-103-11	ELECT	470uF	20%	16V
C713	1-164-159-11	CERAMIC	0.1uF		50V
		(WR735S:AEP, G, AUS)			
C714	1-164-159-11	CERAMIC	0.1uF		50V
		(WR735S:AEP, G, AUS)			
C715	1-164-159-11	CERAMIC	0.1uF		50V
		(WR735S:Canadian, WR701ES)			
C716	1-164-159-11	CERAMIC	0.1uF		50V
		(WR735S:Canadian, WR701ES)			
C731	1-136-169-00	FILM	0.22uF	5%	50V
C732	1-136-169-00	FILM	0.22uF	5%	50V
C901	1-126-157-11	ELECT	10uF	20%	16V

## &lt; CONNECTOR &gt;

* CN32A	1-580-784-11	CONNECTOR, BOARD TO BOARD
* CN33A	1-580-784-11	CONNECTOR, BOARD TO BOARD
CN502	1-750-425-11	CONNECTOR, FFC/FPC 20P
* CN703	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P
		(WR735S:AEP, G, AUS)
* CN704	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P
		(WR735S:Canadian, WR701ES)

CN903	1-691-646-11	SOCKET, CONNECTOR 11P
CN904	1-691-644-11	SOCKET, CONNECTOR 7P
CN905	1-691-646-11	SOCKET, CONNECTOR 11P
CN906	1-691-644-11	SOCKET, CONNECTOR 7P
CNP901	1-750-454-11	CONNECTOR, FFC/FPC 13P

CNP902	1-750-468-11	CONNECTOR, FFC/FPC 27P
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Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
ECP1	1-690-880-81	LEAD (WITH CONNECTOR)	
< FUSE >			
△F702	1-532-259-00	FUSE, TIME-LAG (T1. 6AL) (WR735S:AEP, G, AUS)	
△F703	1-532-259-00	FUSE, TIME-LAG (T1. 6AL) (WR735S:AEP, G, AUS)	
△F704	1-532-743-11	FUSE, GLASS TUBE (2A/125V) (WR735S:Canadian, WR701ES)	
△F705	1-532-743-11	FUSE, GLASS TUBE (2A/125V) (WR735S:Canadian, WR701ES)	
< IC >			
IC901	8-741-100-48	IC SBX1610-59	
< JACK >			
J502	1-507-796-71	JACK (HEADPHONES)	
< RESISTOR >			
R534	1-247-862-11	CARBON 20K 5% 1/4W	
R535	1-247-862-11	CARBON 20K 5% 1/4W	
R536	1-249-431-11	CARBON 15K 5% 1/4W	
R840-843			
	1-249-429-11	CARBON 10K 5% 1/4W	
R871	1-249-429-11	CARBON 10K 5% 1/4W	
R901	1-249-418-11	CARBON 1.2K 5% 1/4W F	
R902	1-249-420-11	CARBON 1.8K 5% 1/4W F	
R903	1-249-422-11	CARBON 2.7K 5% 1/4W F	
R904	1-249-424-11	CARBON 3.9K 5% 1/4W F	
R905	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R907	1-249-422-11	CARBON 2.7K 5% 1/4W F	
R908	1-249-424-11	CARBON 3.9K 5% 1/4W F	
R909	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R910	1-249-431-11	CARBON 15K 5% 1/4W	
R911	1-249-437-11	CARBON 47K 5% 1/4W	
R912	1-249-418-11	CARBON 1.2K 5% 1/4W F	
R913	1-249-420-11	CARBON 1.8K 5% 1/4W F	
R914	1-249-422-11	CARBON 2.7K 5% 1/4W F	
R915	1-249-424-11	CARBON 3.9K 5% 1/4W F	
R916	1-249-431-11	CARBON 15K 5% 1/4W	
R917	1-249-418-11	CARBON 1.2K 5% 1/4W F	
R918	1-249-420-11	CARBON 1.8K 5% 1/4W F	
R919	1-249-418-11	CARBON 1.2K 5% 1/4W F	
R920	1-249-420-11	CARBON 1.8K 5% 1/4W F	
R921	1-249-422-11	CARBON 2.7K 5% 1/4W F	
R922	1-249-424-11	CARBON 3.9K 5% 1/4W F	
R923	1-249-427-11	CARBON 6.8K 5% 1/4W F	

Ref. No.	Part No.	Description	Remark
R924	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R925	1-249-431-11	CARBON 15K 5% 1/4W	
R926	1-249-437-11	CARBON 47K 5% 1/4W	
R927	1-249-437-11	CARBON 47K 5% 1/4W	
R940	1-249-431-11	CARBON 15K 5% 1/4W	
< VARIABLE RESISTOR >			
RV501	1-223-332-11	RES, VAR, CARBON 10K (REC LEVEL)	
RV502	1-223-333-11	RES, VAR, CARBON 100K (BALANCE)	
< SWITCH >			
S901	1-554-303-21	SWITCH, TACTILE (SYNCHRO DUBBING A→B (HIGH))	
S902	1-554-303-21	SWITCH, TACTILE (SYNCHRO DUBBING A→B (NORMAL))	
S903	1-554-303-21	SWITCH, TACTILE (A+B REC)	
S904	1-554-303-21	SWITCH, TACTILE (COUNTER (RESET)) (DECK B)	
S905	1-554-303-21	SWITCH, TACTILE (COUNTER (MEMORY)) (DECK B)	
S906	1-554-303-21	SWITCH, TACTILE (COUNTER (MEMORY)) (DECK A)	
S907	1-554-303-21	SWITCH, TACTILE (AUTO CALIBRATION) (DECK A)	
S908	1-554-303-21	SWITCH, TACTILE (AUTO CALIBRATION) (DECK B)	
S909	1-554-303-21	SWITCH, TACTILE (■) (DECK A)	
S910	1-554-303-21	SWITCH, TACTILE (▷) (DECK A)	
S911	1-554-303-21	SWITCH, TACTILE (<1) (DECK A)	
S912	1-554-303-21	SWITCH, TACTILE (   PAUSE) (DECK A)	
S913	1-554-303-21	SWITCH, TACTILE (● REC MUTE) (DECK A)	
S914	1-554-303-21	SWITCH, TACTILE (● REC) (DECK A)	
S915	1-554-303-21	SWITCH, TACTILE (◀◀) (DECK A)	
S916	1-554-303-21	SWITCH, TACTILE (▶▶) (DECK A)	
S917	1-554-303-21	SWITCH, TACTILE (■) (DECK B)	
S918	1-554-303-21	SWITCH, TACTILE (▷) (DECK B)	
S919	1-554-303-21	SWITCH, TACTILE (<1) (DECK B)	
S920	1-554-303-21	SWITCH, TACTILE (   PAUSE) (DECK B)	
S921	1-554-303-21	SWITCH, TACTILE (● REC MUTE) (DECK B)	
S922	1-554-303-21	SWITCH, TACTILE (◀◀) (DECK B)	
S923	1-554-303-21	SWITCH, TACTILE (▶▶) (DECK B)	
S924	1-554-303-21	SWITCH, TACTILE (● REC) (DECK B)	
S925	1-692-465-11	SWITCH, SLIDE (DIR MODE)	
S927	1-554-118-00	SWITCH, PUSH (1 KEY) (MPX FILTER)	
S928	1-692-466-11	SWITCH, ROTARY (DOLBY NR)	
S930	1-554-303-21	SWITCH, TACTILE (COUNTER (RESET)) (DECK A)	
S931	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)	

The components identified by mark △ or dotted line with mark. △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



Ref. No.	Part No.	Description	Remark
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## &lt; FLUORESCENT INDICATOR &gt;

VFD901 1-517-162-11 INDICATOR TUBE, FLUORESCENT

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\* 1-634-841-14 SW-A BOARD

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## &lt; CONNECTOR &gt;

\* CNP81 1-568-852-11 SOCKET, CONNECTOR 9P

## &lt; IC &gt;

IC81 8-719-710-03 IC PHOTO REFLECTOR NJL5165K-B (H1)

IC82 8-719-710-03 IC PHOTO REFLECTOR NJL5165K-B (H1)

## &lt; RESISTOR &gt;

R81 1-249-414-11 CARBON 560 5% 1/4W

R82 1-247-818-11 CARBON 300 5% 1/4W

R83 1-247-834-11 CARBON 1.3K 5% 1/4W

R84 1-249-417-11 CARBON 1K 5% 1/4W

R85 1-249-408-11 CARBON 180 5% 1/4W

R86 1-249-408-11 CARBON 180 5% 1/4W

## &lt; SWITCH &gt;

S81 1-571-958-11 SWITCH, PUSH (1 KEY) (STOP DET)

S82 1-571-281-21 SWITCH, LEAF (70u DET)

S83 1-571-281-21 SWITCH, LEAF (METAL DET)

S84 1-571-281-21 SWITCH, LEAF (ERASE PROOF (SIDE A))

S85 1-571-281-21 SWITCH, LEAF (ERASE PROOF (SIDE B))

S86 1-571-281-21 SWITCH, LEAF (HALF DET)

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## MISCELLANEOUS

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11 1-575-730-11 WIRE, FLAT TYPE (5 CORE)

12 1-590-217-11 WIRE, FLAT TYPE (20 CORE)

△13 1-558-945-21 CORD, POWER (POLAR. SPT-1)  
(WR735S:Canadian, WR701ES)

△13 1-575-651-21 CORD, POWER (WR735S:AEP, G)

△13 1-696-845-11 CORD, POWER (WR735S:AUS)

66 1-575-905-11 WIRE, FLAT TYPE (9 CORE)

70 1-690-589-31 WIRE, FLAT TYPE (13 CORE)

71 1-690-729-11 WIRE, FLAT TYPE (27 CORE)

73 1-575-905-11 WIRE, FLAT TYPE (9 CORE)

84 1-590-241-11 WIRE, FLAT TYPE (7 CORE)

85 1-590-241-11 WIRE, FLAT TYPE (11 CORE)

120 1-638-983-11 MOTOR FLEXIBLE BOARD

HRPE101 A-2003-838-F DECK ASSY, HEAD (RECORD/PLAYBACK/ERASE)

M1 X-3365-377-1 MOTOR (CAPSTAN) ASSY

Ref. No.	Part No.	Description	Remark
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M2 X-3363-501-1 MOTOR (RELL) ASSY

△T701 1-450-869-11 TRANSFORMER, POWER (WR735S:Canadian,  
WR701ES)

△T701 1-450-870-11 TRANSFORMER, POWER (WR735S:AEP, G, AUS)

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## ACCESSORIES &amp; PACKING MATERIALS

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1-465-738-11 REMOTE COMMANDER (RM-J903)  
(WR735S:Canadian)

1-558-271-11 CORD, CONNECTION

1-696-170-11 CORD, CONNECTION

2-181-754-01 COVER, BATTERY (WR735S:Canadian)

\* 3-354-913-01 CUSHION

\* 3-389-330-01 INDIVIDUAL CARTON (WR701ES)

\* 3-389-330-11 INDIVIDUAL CARTON (WR735S)

3-755-288-11 MANUAL, INSTRUCTION (RM) (ENGLISH, FRENCH)  
(WR735S:Canadian)3-756-576-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH,  
SPANISH, PORTUGUESE) (WR735S:AEP)3-756-576-21 MANUAL, INSTRUCTION (ENGLISH)  
(WR735S:Canadian, AUS, WR701ES)3-756-576-31 MANUAL, INSTRUCTION (FRENCH)  
(WR735S:Canadian)3-756-576-41 MANUAL, INSTRUCTION (GERMAN, DUTCH,  
SWIDISH, ITALIAN) (WR735S:AEP)

3-756-576-51 MANUAL, INSTRUCTION (GERMAN) (WR735S:G)

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## HARDWARE LIST

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#1	7-682-548-09 SCREW +BVTT 3X8 (S)
#2	7-685-534-19 SCREW +BTP 2.6X8 TYPE2 N-S
#3	7-682-547-09 SCREW +BVTT 3X6 (S)
#4	7-621-849-00 SCREW (BV/RING)
#5	7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3

#6	7-621-770-XX SCREW +BVTT 2.6X8 (S)
#7	7-621-773-95 SCREW +BVTT 2.6X6 (S)
#8	7-685-134-19 SCREW (+ PTPWH) (2.6X8)
#9	7-621-775-00 SCREW +B 2.6X3
#10	7-627-556-08 SCREW +P 2.6X2.8

The components identified by mark △ or dotted line with mark. △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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# TC-WR701ES/WR735S

## SONY<sup>®</sup> SERVICE MANUAL

*US Model*

TC-WR701ES

*Canadian Model*

*AEP Model*

*Australian Model*

TC-WR735S

## SUPPLEMENT-1

File this supplement with the service manual.

BLOCK DIAGRAM



BLOCK DIAGRAM

